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Ethnobotany of the Nitinaht Indians of Vancouver Island

by

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PREFACE

This study was initiated in the spring of 1980 under a grant provided by the Friends of the British Columbia Provincial Museum. Little is known of the ethnobotany of the Native peoples on the west coast of Vancouver Island. Research on the ethnobotany of the Hesquiat Nootka has been carried out by the senior author of this study in collaboration with Dr. Barbara Efrat, Curator of Linguistics at the British Columbia Provincial Museum, and this work has recently been published (Turner and Efrat, 1982). Additionally, some work on Manhousat Nootka ethnobotany was done with Luke Swan by Nancy Turner and David Ellis (Ellis and Turner, 1976). Preliminary studies were undertaken in the summer of 1978 on the ethnobotany of the Nootka peoples near Pacific Rim National Park, including the Ahousat, Opitsat, Clayoquot, Ohiat, and Toquat groups (Fenn *et al.*, 1979). However, until now, no systematic work has been undertaken on Nitinaht ethnobotany.

At a time when many Native cultural traditions are being lost through change in living patterns and acculturation into western technological society, the recording of traditional information on the names and uses of plants is important and urgent. This is particularly so in the case of the Nitinaht people. Related linguistically and culturally both to the Nootka on the northern side of their territory and to the Makah on the south side of Juan de Fuca Strait, the Nitinaht are, nevertheless, a discrete group and their names for plants and inter-relationships with their surrounding vegetation show many unique features. There are still many unanswered questions concerning the origin of these three Wakashan groups and their exact linguistic relationships. Some of these may well be clarified by examining the botanical terminology and determining which plant species have names that are related and which have unique names. The medicinal and other uses of plants are also good indicators of the degree of historical contact between peoples. It is thus hoped that the present study will help to solve the problem of the origin of the Nitinaht people.

Furthermore, since much of the traditional territory of the Nitinaht falls within the proposed boundaries of the West Coast Trail and Nitinat Triangle portions of Pacific Rim National Park, the importance of ethnobotanical information as part of the overall resource inventory of this region is obvious. The data provided by this study should be useful in planning what the future role of various traditional resource areas will be, and in interpreting to park visitors and to the public in general the natural history and human history of the park lands.

Finally, we feel this study will be a valuable contribution to the Nitinaht people themselves, because it will preserve an important element of their heritage. It would be unrealistic to assume that anyone would ever again return to the traditional Nitinaht lifestyle. However, in the future, many may find pleasure and a deeper knowledge of life by rediscovering some features of the lives of their ancestors. If such knowledge as this is recorded, that will always be possible.

During our research, one of the Nitinaht elders involved in the study, Mary Thompson, passed away. All of those consulted are elderly and whenever a death occurs in one of this generation, much valuable information is irretrievably lost. There are only a very few fluent Nitinaht speakers left; these are the people who hold the knowledge of traditional plant use and nomenclature.

A number of people were involved in this study, but one in particular, John Thomas, the second author, deserves special recognition and credit. The research would not have been possible without his knowledge, his amazing recollective ability, and his diligence and conscientiousness both in providing information from this personal experience and in obtaining it, recently and in his youth and childhood, from others who knew it. Born at Clo-oose (ƛu·ʔu·ws) in 1913, he was raised until his mid-teens in the traditional Nitinaht lifestyle. He undertook manhood training in the Nitinaht tradition and learned from master craftsmen of the time how to make and use many types of artifacts and implements. He watched his grandmother when she sewed tule mats and observed his grandfather, Thomas Klishil (from whom he inherited one of his own Nitinaht names, ƛí·ɬal), as he worked at his sockeye traps along the upper Cheewhat River. He learned how to prepare cedar-withe ropes, and kelp fishing lines, and how to make halibut hooks from tree knots. Many of the traditional medicines and tonics were administered to him at one time or another and he was carefully instructed on fishing and hunting lore.

Many years later, in middle age, he was hospitalized for an extended time due to a logging accident, and he undertook to complete his formal education. Later, in 1975, he received training as a Native Language Instructor under the guidance of Drs. Thomas Hess and Barry Carlson at the Department of Linguistics, University of Victoria. He readily mastered the ability to record his own language in phonetic script. He and Dr. Hess collaborated on an impressive introductory manual on the Nitinaht language and culture (Thomas and Hess, 1978). With his ability to write Nitinaht, he

became even more valuable as an ethnobotanical consultant. Most of the plant names and terminology included here were recorded and checked by him. Dr. Carlson and his graduate assistant, Marie Stein, a student of the Nitinaht language, were also involved in the transcription of Nitinaht plant names and Dr. Carlson in particular collaborated with John Thomas in the analysis of these terms.

John Thomas' mother, Ida Jones, and his stepfather, Chief Charlie Jones, both of the Pacheenaht Reserve near Port Renfrew (Port San Juan), were also major contributors to the study. Information was also given by the late Mary Thompson, already mentioned, and Lena Johnson, both of the Malachan Reserve on Nitinat Lake. The authors are grateful to these respected and knowledgeable people for sharing their wisdom and experience with us, and we dedicate this work to them, to their families and to their descendants for generations to come.

Many other people made significant contributions to this project, and to them we offer our sincere thanks. These include: Sheilagh Ogilvie of Victoria, who was much appreciated as chief cook on our Whyac expedition; Bill Mersereau of Quebec; Kristin Carlson of Victoria; Bernice Touchie of Ucluelet; "Junior" Joseph of Nitinat Lake; Gus Jonasson of Port Alberni; Dorothy Ordway and Jim Hamilton of Clo-oose; Flora Joseph and Ida Russ of Victoria; Dr. Adam F. Szczawinski of Victoria; Dr. Harriet V. Kuhnlein, nutritionist at the University of British Columbia, Vancouver; Dr. Alan Austin, Department of Biology, University of Victoria; Dr. John M. Gillett, National Herbarium of Canada, National Museum of Natural Sciences, Ottawa; Dr. Andrea Laforet, ethnologist, National Museum of Man, Ottawa; Sue Carlson of Victoria; Drs. Pamela and Harold Amoss of the University of Washington, Seattle; Randy Bouchard, British Columbia Indian Language Project, Victoria (who transcribed the Manhousat plant names given here, cited under Ellis and Turner, 1976); Dr. Brent Galloway of Chilliwack, B.C.; Dr. L. C. Thompson, Department of Linguistics, University of Hawaii, Honolulu; Dr. Thomas Hess, Department of Linguistics, University of Victoria, and Dr. Eugene Arima, National Museum of Man, Ottawa.

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Finally, we would like to acknowledge Elizabeth J. Stephen, botanical illustrator at the Museum, for her careful, beautifully done drawings. Photographic illustrations are acknowledged with the captions.

Nancy J. Turner
Ẋi-ẗal
Barry F. Carlson
Robert T. Ogilvie

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WARNING

The medicines described in this publication are not recommended for use, except under the advice of a physician. They were used by the Nitinaht people only under strictly controlled conditions and were administered by those who had the knowledge and experience of many generations behind them. Many of these medicines can cause illness and even death if used improperly; they have been recorded here as part of the heritage of the Nitinaht people, for scientific interest and use in pharmacological research.

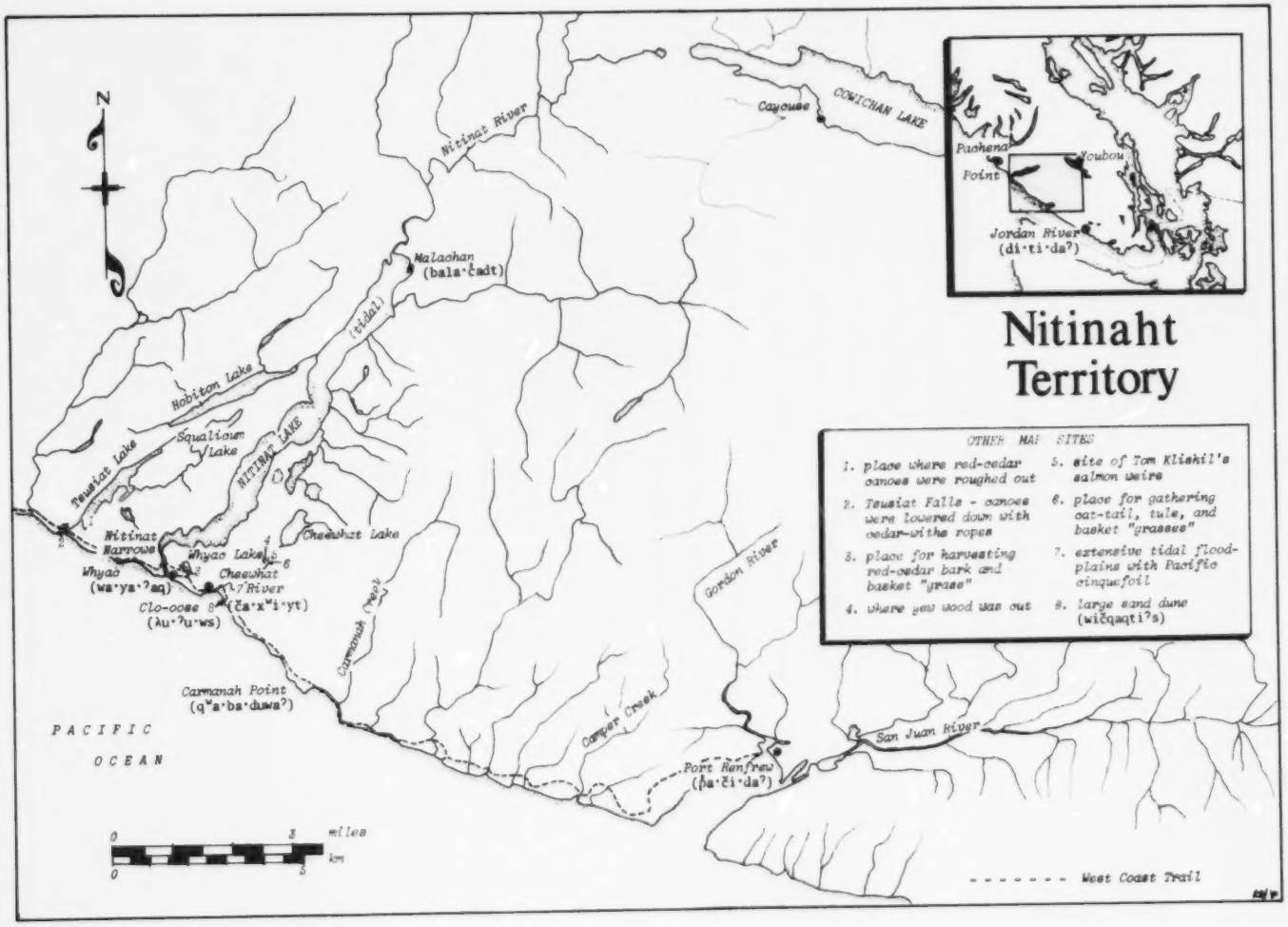

Fig. 1 Nitinaht territory, showing some important resource areas. (Drawn by Robert D. Turner)

INTRODUCTION

The traditional home of the Nitinaht* people is along the southwestern coast of Vancouver Island, British Columbia from near Jordan River to Pachena Point, extending inland along Nitinat Lake and some of the adjacent valleys to as far east as Cowichan Lake (Figure 1). This territory encompasses a vast expanse of shoreline and forest land, mostly within the Coastal Western Hemlock vegetation zone. As with other groups of the Northwest Coast region, plants played a vital role in the economic life of the Nitinaht people and, probably as a consequence, were also significant in other facets of Nitinaht culture, as well as featuring prominently in their language and cognitive systems.

It is the purpose of this paper to present, mainly through a compilation of interviews with contemporary Nitinaht speakers, as complete a record as possible of the traditional inter-relationship between the Nitinaht people and their surrounding vegetation. This includes an inventory of plant species recognized, named, and/or used in the Nitinaht culture, with details of their nomenclature and, where applicable, their use as foods, materials, or medicines and the methods employed in harvesting and preparing them. Well over one hundred indigenous species are discussed in this inventory. An additional 30 or so species of introduced plants and plant products named and used by the Nitinaht within the last two centuries, are also included (see Appendix 4).

Previous to, but in conjunction with, the species inventory are discussions of the plants within the context of their uses and their role in traditional beliefs and in Nitinaht folk classification. Also included (Appendix 3) is a dictionary of the general botanical vocabulary in the Nitinaht language. Some of the plant species that were not recognized by the Nitinaht people consulted, and were apparently not used, are listed in Appendix 2.

As mentioned in the Preface, the majority of information in this study was provided by the second author, John Thomas (Figure 2). A fluent speaker of Nitinaht, John has retained a wealth of knowledge on traditional names and uses of plants, both from his own personal experience, particularly during the early part of his life, and from other members of his family. Notable amongst these were his late grandparents at Clo-oose, the village where he was born, and his mother, Mrs. Ida Jones, and stepfather, Chief Charlie Jones, both presently of the Pacheenaht Reserve near Port Renfrew. John Thomas is 67 years of age (1980)—old enough to remember when many more plants were being used in traditional ways than is now the case. Implements were still being fashioned in traditional designs and many of the indigenous foods, medicines, and ceremonial plants were still employed. Nevertheless, even in his childhood, some of the original plant foods, such as red elderberries and tiger lily bulbs, were no longer being used, and many preparation techniques, such as pit-cooking "roots" and drying berries in cakes for winter storage, were already, for the most part, things of the past. Still, as a youth John Thomas had an inquiring mind and a gift for retaining information, and hence has been able to provide details of plant knowledge not actually witnessed or experienced by him.

Many hours were spent interviewing him and recording his ethnobotanical knowledge. These interviews were carried out over a period of nearly a year, but mostly during the spring and early summer of 1980. The sessions involved transcription and analyses of Nitinaht plant names and botanical terminology and discussions and descriptions of the actual use of plants, as well as gathering, preparation, and any other pertinent details he could recall. The botanical discussions in these interviews were carried out mainly between John Thomas and Nancy Turner, whereas the linguistic details were discussed mainly between John Thomas and Barry Carlson and/or Marie Stein, Dr. Carlson's assistant. Almost all of these interviews were taped and word-for-word transcriptions were made by Nancy Turner to ensure accuracy in the information given.** In most cases, John Thomas, who is also trained as a linguist and Native language instructor, transcribed the Nitinaht terms in these tapes and all were checked by himself and Barry Carlson. Sometimes during these discussions plant specimens were used as identification samples but, in many cases, John was familiar enough with the English names to discuss the plants directly without the aid of a sample. Later, virtually all identifications were checked with living specimens during our field work.

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* In a geographical context, this term is usually spelled Nitinat (e.g. Nitinat Lake). It is derived from the original term, **di·ti·d?a·?tx**, pertaining to present-day Jordan River, **di·tida?**. In Nootka, **d** changes to **n**, indicating that it was the Nootka form, not Nitinaht, from which the anglicized term was borrowed (Arima, 1975–76).

** Copies of all tapes made during the study are held by the Linguistics Division, British Columbia Provincial Museum. An additional tape, incorporating virtually all of the Nitinaht plant terms in the order they are presented in the text, was also made and is held at the Linguistics Division.

In all, four field trips were made: three to Port Renfrew, and one, of week's duration, down Nitinat Lake to near Whyac (**wa·ya·ʔaq**) and Clo-oose (**χu·ʔu·ws**) (Figures 3, 4 and 5). On this trip, all four authors were present, as well as Marie Stein and several others.* The trip to Whyac and Clo-oose was particularly valuable in terms of placing the ethnobotanical information obtained thus far in perspective, as well as reminding John Thomas of a wealth of new ethnobotanical details not yet recorded. We were able to see, first-hand, some of the significant resource areas used by the Nitinaht

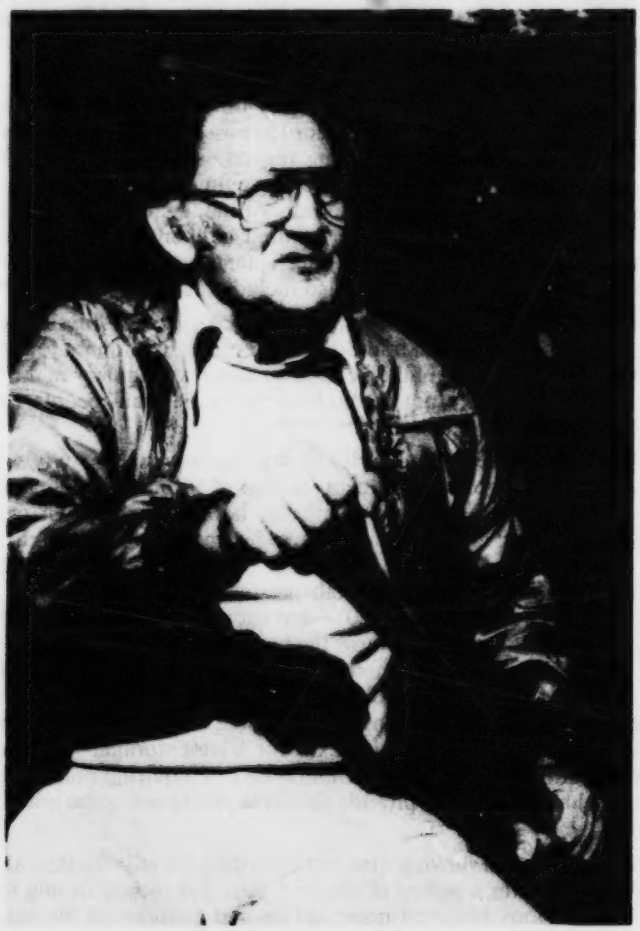

Fig. 2 John Thomas (**χ̓ íšal**). (Nancy J. Turner)

people formerly living in the region. Two trips were made up the Cheewhat (**ča·xʷi·yt**) River (Figure 6) to the former harvesting sites for three-cornered "grass" *(Scirpus americanus)***, cat-tail, and tule, and to see the location where John Thomas' grandfather had cedar-slat salmon traps. At Whyac, we saw the spot at the Nitinat Narrows where duck nets of nettle-cottonwood fibre were strung (Figure 7) and noted places where cedar bark and basket "grass" *(Carex obnupta)* were harvested in the past. Whyac Lake (Figure 8) was noted as a source of several peatland species, including Labrador tea and bog cranberry. The large sand dune south of Clo-oose (Figure 9) was also of interest as a harvesting place for large salal berries, kinnikinnick leaves for smoking, and white pine for pitch.

* Including Sheilagh Ogilvie, Bill Mersereau (field assistant to Bob Ogilvie), and Kristin Carlson. John Thomas' niece, Bernice Touchie, herself a teacher and Native language specialist, also joined us for part of the time.

** Except in the discussion on vegetation and environment, scientific names are provided in the general text of this paper only if the colloquial name referred to is not generally known or widely applied in botanical literature. The scientific names of all species mentioned can be found by referring to the index and then to the page reference for the species in the inventory or appendices.

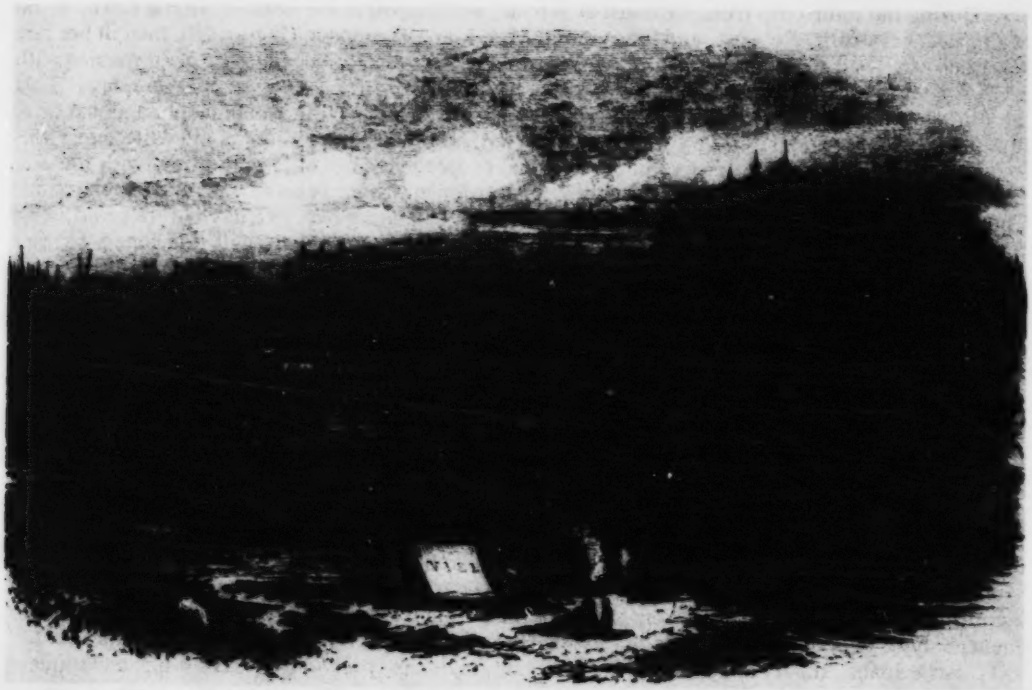

Fig. 3 Whyac ("Whyack") village, 1864, from engraving by F. Whymper, on a Vancouver Island exploring expedition; members of the expedition are camped on the beach in the foreground. Caption reads: "This village consists of wooden huts, protected by pickets, or pallisades, from the violence of the surf dashing on the beach. It is difficult at any time to effect a landing . . ." (*The Illustrated London News*, Nov. 24, 1866)

Fig. 4 Whyac Village site, 1980. (Nancy J. Turner)

During the return trip from the coast at Whyac, we stopped at the head of Nitinat Lake, at the Malachan (**bala·čadt**) Reserve, and interviewed Mrs. Mary Thompson (Figure 10), then in her late seventies, who had spent most of her life at Whyac. We were able to check many plant species with her, using fresh specimens collected at Whyac and Clo-oose during the previous few days. This interview, which was taped, was conducted for the most part in the Nitinaht language, and was later translated by John Thomas. Mary Thompson passed away only a few months after the interview. Previously, in June, more extensive interviews had been carried out at Port Renfrew with Ida and Charlie Jones (Figures 11 and 12). At that time, Mrs. Jones was 86 years of age, and her husband, Chief Jones, was about 103 years old. These interviews, extending over two days, were taped, with conversations in both English and Nitinaht. Most of the discussions were with Ida Jones, but her husband contributed significantly, particularly when names or uses of plants were not recalled by her. He often joined in to clarify certain statements for us, or to add detail. The tapes were jointly transcribed by Nancy Turner and John Thomas. Many plant specimens, gathered from Sooke to Port Renfrew, were used as samples in the interviews. Any whose identification was at all in doubt were pressed for later verification. These, and many plant specimens from the Whyac and Clo-oose areas collected by R. T. Ogilvie and W. O. Mersereau during our trip, are presently housed in the Herbarium at the British Columbia Provincial Museum.

It had been our intention to discuss further our fresh specimens from Whyac and Clo-oose with Ida and Charlie Jones, but unfortunately at that time they were called away unexpectedly and no interview was possible. However, in late August, another trip to Port Renfrew was made by John Thomas and Nancy Turner, together with Dr. Harriet V. Kuhnlein, nutritionist at the University of British Columbia, during the course of additional research on analyses of some important Nitinaht "root" foods—namely Pacific cinquefoil, wild clover, and camas bulbs. The purpose of this trip was primarily to collect sufficient quantities of these foods for traditional pit-cooking and subsequent analyses of both raw and cooked samples. However, an additional interview was made with Ida and Charlie Jones, mainly concerning Nitinaht plant foods, and preparation and storage techniques. This interview was taped and later transcribed. Yet another trip to Port Renfrew was made during the traditional root-digging season in late October, but Ida and Charlie Jones were away at this time. Later, however, they were able to taste samples of the "root" foods cooked by traditional pit-steaming and stove-top steaming methods during this field trip. This last trip was undertaken by Harriet Kuhnlein, Nancy Turner, John Thomas, Barry Carlson, and a few other volunteer root-diggers. The results of the analysis research and associated root-digging and cooking experiments have been published separately (Turner and Kuhnlein, 1982; Kuhnlein *et al.*, 1982). However, much of the experience and information obtained is included in this paper.

Another interview, with Lena Johnson of the Malachan Reserve at Nitinat Lake, was carried out in November, 1980, by Nancy Turner and John Thomas during a visit by Mrs. Johnson to Victoria. This session was not taped and was carried out, for the most part, in Nitinaht, with John Thomas acting as interpreter. (Mrs. Johnson understood and could converse in English, but preferred to use her own language. She had spent most of her life at Whyac.) A number of fresh plant specimens were used as samples in this interview and several other plants, already known by their Nitinaht names, were discussed.

Information from the tape transcriptions, interview notes, and field notes was collated during the winter of 1980-81. Additional literature research was carried out at this time, but little published information pertaining to Nitinaht ethnobotany exists. One useful source, as yet unpublished, was Thomas and Hess (1978). Ethnobotanical information on neighbouring groups, notably Makah (Densmore, 1939; Gunther, 1973) and Central Nootka (Turner and Efrat, 1982; Ellis and Turner, 1976; Fenn *et al.*, 1979), was found to be very useful and was occasionally used during the interviews as a means of "last resort" elicitation in cases where no Nitinaht name was recalled, or to corroborate some use or belief about a plant that might have been common to more than one group. Such information was used, however, only after all other direct forms of questioning had been tried, and was carefully cross-checked with other Nitinaht consultants. More often than not, no information was gained by this method, but sometimes, producing a name or use for related group resulted in significant recollection of information pertaining to Nitinaht.

John Thomas and the other Nitinaht people interviewed were careful to provide only information they knew to be applicable for Nitinaht and took pains to point out plant names and/or uses that they felt were borrowed from other groups. In many cases, the ethnobotanical details provided by the Nitinaht people were corroborated later, and independently, by the literature on neighbouring

Fig. 5 Clo-oose Village, as it looked in the mid-1930s. (Ethnology Division, BCPM)

Fig. 6 The Cheewhat River, where John Thomas' grandfather had his sockeye salmon weir (see also Fig. 36). (Nancy J. Turner)

Fig. 7. The mouth of the Nitinat Narrows, at Whyac, showing the bluff (at right) from which duck nets were formerly strung (see Fig. 86). (Nancy J. Turner)

Fig. 8 Whyac Lake. (Robert T. Ogilvie)

Fig. 9 Sand dune near Clo-oose. (Robert T. Ogilvie)

groups. A case in point is the information given by Lena Johnson that waxberry was used as a medicine for inability to urinate. Since none of the other consultants knew of this use, one might feel that such information was restricted only to Mrs. Johnson's knowledge. However, the same information is also found in Densmore (1939) for Makah. As the Densmore publication is quite obscure, it is unlikely that Mrs. Johnson picked up her knowledge of the medicine from this source; rather, it is an indication of more widespread use of the remedy than it would appear originally. It is also an indication that Mrs. Johnson has retained and was providing more than just a superficial knowledge of Nitinaht medicines. By far the majority of terms of the same etymon* between Nitinaht and Nootka or Makah were compared subsequently to our interviews, not during them.

The orthographic system for denoting Nitinaht terms in this report is one used by many linguists for Northwestern languages, and is described in further detail in Appendix 5. It is a modified version of the International Phonetic Alphabet. The same system was used in the Hesquiat ethnobotany (Turner and Efrat, 1982). All native names are written in boldface type. Additionally, the names quoted from Densmore (1939) and Gunther (1973), and other terms that were not verified directly, are included in quotation marks. Sources of information are cited throughout by author and date, for published information, or by the initials of the Nitinaht people in the case of first-hand information. These are as follows:

JT—John Thomas
IJ—Ida Jones
CJ—Chief Charlie Jones
MT—Mary Thompson
LJ—Lena Johnson

Botanical nomenclature generally follows that used by Hitchcock *et al.* (1955–69), or in various taxonomic publications of the British Columbia Provincial Museum (e.g., Brayshaw, 1976). In some cases, the nomenclature of Taylor and MacBryde (1977) is followed, and most of the colloquial, or common names cited are from this source. Common synonyms and alternate common names are provided where appropriate.

* i.e., linguistically related, having been derived from a common source.

Fig. 10 above. The late Mary Thompson, holding a ceremonial rattle and some of her own basket weaving (see also Fig. 57). (Nancy J. Turner)

Fig. 11 top right. Ida Jones, John Thomas' mother and a major contributor to this study. She is holding one of her own finished baskets. (Nancy J. Turner)

Fig. 12 right. Chief Charlie Jones, John Thomas' stepfather, who in 1981 celebrated his 105th birthday. He provided valuable information, both directly and indirectly, through John Thomas. (Nancy J. Turner)

THE NITINAHT: LINGUISTIC AFFILIATIONS

Nitinaht, along with Makah and Nootka, is a member of the Southern (or Nootkan) Branch of the Wakashan language family. Makah is spoken to the south of Nitinaht, on the northwestern tip of the Olympic Peninsula in Washington State. Nootka consists of a number of dialects spoken aboriginally by bands inhabiting the coast and adjacent inlets north of the Nitinaht homeland. This area extends from Pachena Point to Cape Cook. In the literature these dialects are often grouped under the headings, Southern (i.e., Nitinaht), Central, and Northern Nootka. As already mentioned, while the focus of this present ethnobotanical study is on Nitinaht, comparative references are made to vocabulary in the Makah language and in several dialects of the Nootka language, especially Hesquiat.

As is the case with most Native languages of North America, the Nootkan languages are moribund, with few fluent speakers who are not elderly. Makah has only a handful of speakers remaining and Nitinaht has no more than fifty. Nootka has the largest number of speakers (certainly numbering in the hundreds) with many living in or near the large population centres of central and southern Vancouver Island.

In 1931 the first detailed study of the Nitinaht language was undertaken by Mary Haas and Morris Swadesh. The following year they published an analyzed Nitinaht story, with grammatical notes, which stands today as the best introduction to the language and the only summary of the grammar that has yet been published (Haas and Swadesh, 1932). In the years following this introductory work, Mary Haas concentrated on the language history of Nitinaht and Nootka, while Morris Swadesh went on to emphasize Nootka language research. Since 1966, Terry J. Klokeid has studied Nitinaht, using data from this language in a number of theoretical articles and conference presentations.

The most recent linguistic work with Nitinaht began in 1974 when Bernice Touchie, a native speaker of Nitinaht then in her twenties, enrolled in the first class of the Native Indian Language Diploma Program at the University of Victoria. The Program was designed to teach linguistic skills to speakers of British Columbia Indian languages. Touchie learned to write her language, became skilled at linguistic analysis, and went on to complete a university degree in linguistics and earn a teacher's certificate in education. Throughout the tenure of her studies, Touchie collected traditional Nitinaht stories and ethnographic descriptions, one of which is published in a collection of Northwest Coast texts (Carlson, 1977). The year following her introduction to linguistics, Touchie coaxed her uncle, John Thomas, into enrolling at the University. As a fluent speaker of Nitinaht, and an elder with extensive cultural knowledge, Thomas soon found a career in linguistics at an age when most people are thinking about retirement. Since 1975 he has pursued research projects, studied linguistic methodology, and, with Thom Hess, developed an introductory course in the Nitinaht language which he teaches at the University of Victoria. His scholarly work includes a paper describing part of the complex modal system of Nitinaht (Carlson and Thomas, 1979); a study of place names, presented at the thirteenth International Conference on Salish Languages (Thomas, 1977); and an introductory manual on Nitinaht language and culture (Thomas and Hess, 1978).

Nootkan (Nitinaht, Makah, and Nootka) vocabulary collected by the authors is presented in a phonetic orthography which is widely used by linguists working with the Native Indian languages of the Americas. For a discussion see Appendix 5. Language citations from other sources are in the orthography used by the individual author.

It has not been the intention of this study to present an exhaustive grammatical analysis of each Nitinaht word. Literal translations of Nitinaht botanical terms are given when they are known. Additional words are sometimes cross-referenced to a term to further clarify its literal meaning. Often this emphasizes the meaning of the word root, which in Nitinaht is always the first (or leftmost) element. For example, Sitka spruce, **tu·ɣupt** (p. 71) is literally "scaring plant". An additional word, **tuɣšiX** "startled, as by a sudden noise", is given to emphasize the meaning of the root **tu·ɣ** "to be scared". Common botanical suffixes, like **-upt**, "plant", are covered in Appendix 3. Beyond this, no attempt is made to acquaint the reader with the more than three hundred suffixal elements or other grammatical processes used in Nitinaht word formation.

It will be noted, however, that the root (leftmost) part of a botanical term is often duplicated (or reduplicated). In Nitinaht, reduplication of the first consonant and vowel of a root is used to indicate "spatial distribution of entities", a concept which is very important in Nitinaht grammar, and which finds extensive use in the Nitinaht view of the botanical world. Although less common, reduplication

is used with some botanical terms to signal a grammatical process, such as repetition or iteration, or is simply a mechanical process required by a particular suffix in a word.

While this is a descriptive study of the ethnobotanical domain in one Northwest Coast language, comparative vocabulary in the other Nootkan languages and sources of borrowing are presented wherever possible. Borrowings may be from a related language, or from a neighbouring language belonging to another linguistic family. We hope that by including information of this type we can contribute to an eventual reconstruction of the language history of Nootkan and a better understanding of the cultural history of the Northwest Coast.

VEGETATION AND ENVIRONMENT

Climate

Meteorological data from Pachena Point (Can. Dept. Transport, 1967) represent a station within the study area and close to sea level. The data are presented in a Climatic-Diagram (Walter, 1955; Walter, *et al.* 1975) (Figure 13); in which the months of the year are on the horizontal axis,

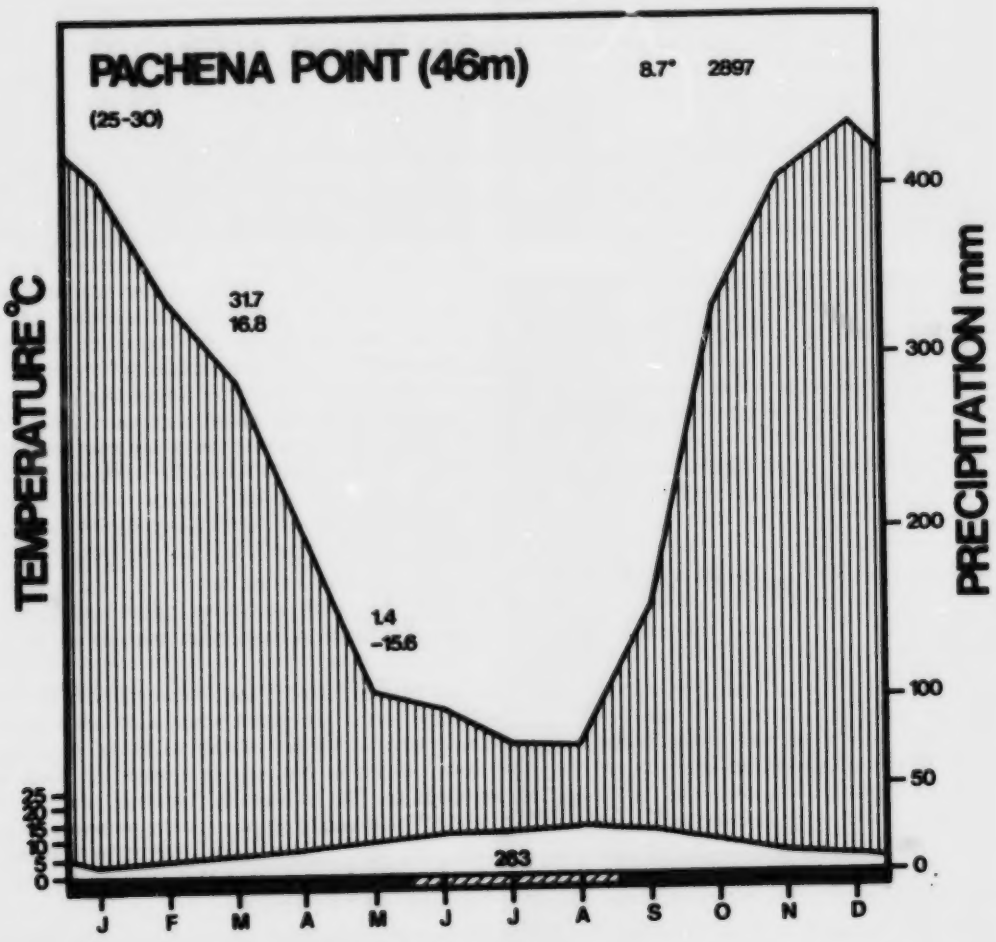

Fig. 13 Climatic Diagram, Pachena Point.

temperature in degrees Celsius on the left vertical axis, precipitation in mm on the right vertical axis, and the ratio of the two scales is 10°C = 20 mm precipitation. The area of the diagram where the precipitation curve is above the temperature curve indicates the moisture-surplus period. (In arid climates, the drought period is indicated by the area where the precipitation curve falls below the temperature curve). The diagram is typical of a pronounced oceanic climate, with a very uniform temperature curve throughout the year, but a pronounced U-shaped precipitation curve with a winter high and summer low pattern, and a pronounced moisture-surplus throughout the year.

Supplementary data included in the diagram are: height above sea level 46 m; duration of meteorological records, 25–30 years; mean annual temperature, 8.7°C; mean annual precipitation, 2897 mm; mean daily minimum of coldest month, 1.4°C; absolute minimum temperature, −15.6; mean daily maximum of warmest month, 16.8°C; absolute maximum temperature, 31.7°C; months with mean daily minimum below 0°C, nil; months with absolute minimum below 0°C, J, F, M, A, M, S, O, N, D; mean duration of frost-free period, 263 days.

The Flora

Detailed inventories of the flora and vegetation of Pacific Rim National Park have been reported by Cordes (1972) and Cordes *et al.* (1974) for the West Coast Trail section, and by Bell (1972) and Bell and Harcombe (1973) for the Long Beach and Broken Islands sections of the park.

The flora of the area is relatively poor in species, consisting mostly of wide-ranging species common to the Pacific coast. A total of 439 species of vascular plants is reported from Pacific Rim National Park: 338 from the Long Beach section, 291 from the West Coast Trail section, and 231 from the Broken Island section. Approximately 150 species, or 34%, are common, occurring throughout the park and much of the west coast of Vancouver Island. A small number of the species are rare; for example from the Broken Island section approximately 66 species, or 29%, are considered as extremely rare.

Vegetation

Most of the study area lies in the Coastal Western Hemlock Forest (Krajina, 1959, 1975, 1978; Klinka *et al.*, 1979). This is the forest of the west coast of Vancouver Island, occupying the coastal plain from sea level to 900 m, and the wettest and mildest of all the forest zones in British Columbia. A small part of the area rises to higher elevations about 900 m, where the Subalpine Mountain Hemlock Forest occurs. In addition there are some small, but important, areas having specialized habitat conditions and distinctive vegetation: the shore habitats, sand dunes, middens, marshes, and bogs.

Coastal Western Hemlock Zone

The area is forested by the Wetter Maritime Coastal Western Hemlock Subzone. In the Köppen system the climate is classed as Cfb/c: a mild, temperate, rainy climate, with cool summers and lacking a dry season. It has the longest frost-free period in British Columbia, a long growing season, and no water-deficit during the year. Under this climate and vegetation the soils have intensive leaching and deep acid humus accumulation, resulting in Ferro-Humic Podzol and Humo-Ferric Podzol profiles.

The forest vegetation is characterized by a predominance of mosses and ericaceous shrubs, but a low presence of herbs. In the tree canopy, western hemlock is the climax and most common species; other trees are: western red cedar, amabilis fir, Sitka spruce, and shore pine. The abundant bryophyte and lichen layer consists of: *Plagiothecium undulatum, Rhytidiadelphus loreus, Isopterygium elegans, Isothecium stoloniferum, Bazzania ambigua, B. denudata, B. tricrenata, Scapania bolanderi, Lobaria oregana, Usnea mollis,* and *Pilophoron clavatus*. Characteristic ericaceous shrubs are: *Gaultheria shallon, Vaccinium alaskaense, V. ovalifolium, V. parvifolium, Menziesia ferruginea;* along with *Oplopanax horridus*. Characteristic species of the impoverished herb layer are: *Cornus canadensis, Dryopteris austriaca, Clintonia uniflora, Rubus pedatus,* and *Blechnum spicant*.

Three variants of this subzone occur in the study area: The Estevan Submontane Variant, occupying a narrow belt about 3–5 km wide along the shore up to 150 m asl. The climate is mild, most of the precipitation falls as rain, and the forest adjacent to the shore is subject to wind exposure and saltspray. The zonal forest community is the *Tsuga heterophylla-Picea sitchensis-Abies*

amabilis-Gaultheria shallon-Vaccinium parvifolium-V. alaskaense type. The characteristic combination of species, in addition to the above, includes: *Pinus contorta, Vaccinium ovatum, Calamagrostis nutkaensis, Polypodium scouleri and Usnea longissima.*

The West Vancouver Island Submontane Variant, which occupies a major part of the study area, extends from 150 to 600 m asl. This is the wettest climate, with precipitation in excess of 3 500 mm/annum, and mostly in the form of rain. The zonal forest community is the *Tsuga heterophylla-Abies amabilis-Rhytidiadelphus-Vaccinium parvifolium-V. alaskaense* type. Additional characteristic species are: *Picea sitchensis, Gaultheria shallon, Hookeria lucens, Mylia taylori* and *Rhizomnium glabrescens.*

The West Vancouver Island Montane Variant is less common in the area occurring at elevations between 600 to 900 m asl. Temperatures are cooler, winter precipitation is in the form of snow, and the growing season is shorter. The zonal forest community is the *Tsuga heterophylla-Abies amabilis-Rhytidiadelphus-Vaccinium ovalifolium-V. alaskaense* type. Additional characteristic species are: *Chamaecyparis nootkatensis, Tsuga mertensiana, Caltha biflora, Streptopus roseus, S. streptopoides, Tiarella unifoliata, Rhizomnium nudum* and *Rhytidiopsis robusta.*

Mountain Hemlock Forest

A few ridges and peaks, such as Carmanah Mountain, Smokehouse Mountain, and Mount Rosander, extend above 900 m into the Coastal Subalpine Mountain Hemlock forest. The climate is cold, snow is in excess of 280 cm and lasts at least six months, the growing season is short, but the ground remains unfrozen during the winter.

The forest here is the West Vancouver Island Variant of the Maritime Forested Mountain Hemlock Subzone. The tree canopy is composed of *Tsuga mertensiana, Abies amabilis* and *Chamaecyparis nootkatensis.* The ground vegetation consists of a predominance of blueberry and other ericaceous shrubs: *Vaccinium alaskaense, V. deliciosum, V. membranaceum, V. ovalifolium, Cladothamnus pyroliflorus* and *Menziesia ferruginea.* The bryophyte layer is well developed: *Orthocaulis floerkii, Pseudoleskea baileyi, Rhytidiopsis robusta, Dicranum pallidisetum* and *Rhizomnium nudum.* There is a low presence of the herb layer: *Caltha biflora, Coptis asplenifolia, Streptopus roseus, S. streptopoides, Tiarella unifoliata, Clintonia uniflora, Polystichum lonchitis* and *Lycopodium annotinum.*

Bog Vegetation

The distinctive acidic, semi-aquatic peat bog vegetation occurs on level terrain with impeded drainage, especially on the shores of ponds and small lakes. The forest edge consists of *Thuja plicata* and *Pinus contorta,* which extend scattered into the bog, and a dense band of tall shrubs: *Spiraea douglasii, Myrica gale, Ledum groenlandicum* and *Kalmia polifolia.* Characteristic bog species are: *Sphagnum* spp., *Carex* spp., *Eriophorum polystachion, Dulichium arundinaceum, Eleocharis palustris, Rhynchospora alba, Juncus* spp., *Deschampsia caespitosa, Triglochin concinnum, Tofieldia glutinosa, Habenaria* spp., *Drosera rotundifolia, D. anglica, Gentiana sceptrum, Pinguicula vulgaris, Lobelia dortmanna, Apargidium boreale, Hypericum anagalloides, Trientalis arctica, Empetrum nigrum, Vaccinium oxycoccos, V. vitis-idaea, Nephrophyllidium crista-galli* and *Menyanthes trifoliata.* Growing in shallow water are: *Potamogeton* spp., *Sparganium* spp. and *Nuphar polysepalum.*

Marsh Vegetation

The marsh meadows on the alluvial flats bordering the Cheewhat River are in striking contrast to the surrounding coniferous forest. The major species are: *Carex obnupta, C. lyngbyei,* and other *Carex* species, *Scirpus americanus, S. lacustris, S. paludosus, Juncus* spp., *Potentilla pacifica* and *Plantago macrocarpa.*

Sand Dune Vegetation

A small sand dune area occurs along Clo-oose beach south of the Cheewhat delta. Active erosion is taking place, the characteristic morphology of dune ridge and slack is absent, and the general structure is of a shallow bowl with sparsely-vegetated sand. Distinctive sand dune plants are: *Carex macrocephala, Polygonum paronychia, Abronia latifolia, Glehnia leiocarpa, Convolvulus*

soldanella, *Ambrosia chamissonis*, and on the perimeter *Tanacetum douglasii*, *Elymus mollis*, carpets of *Arctostaphylos uva-ursi*, and thickets of *Gaultheria shallon*.

Shore Vegetation

There is a diversity of shore habitats having specialized flora related to the degree of tidal flooding, saltspray exposure, and sand versus rock substrate.

The sea grasses—*Zostera marina* and *Phyllospadix* spp.—are subtidal, extending furthest down the beach under water. In the tidal zone, subjected to daily flooding and exposure, are: *Salicornia virginica*, *Spergularia canadensis*, *S. rubra*, *Glaux maritima*. Slightly higher in the intertidal zone are: *Triglochin maritimum*, *Plantago maritima*, *Distichlis spicata*, *Puccinellia nuttalliana*, *P. pumila*, *Lilaeopsis occidentalis*. In the upper shore and the driftwood zone are: *Chenopodium album*, *Atriplex patula*, *Honkenya peploides*, *Cakile edentula*, *Trifolium wormskioldii*, *Armeria maritima*, *Elymus mollis*, *Hordeum brachyantherum*, *Deschampsia caespitosa*, *Artemisia suksdorfii and Sagina saginoides*. Bordering the beach and forest-edge are: *Scrophularia californica*, *Stachys mexicana*, *Conioselinum pacificum*, *Angelica lucida*, *Calamagrostis nutkaensis*, *Carex lyngbyei*, *Fragaria chiloensis*. The forest edge is composed primarily of the saltspray-tolerant *Picea sitchensis*, and dense thickets of *Gaultheria shallon*, *Rubus spectabilis* and *R. parviflorus*.

Shell Midden Habitats

Shell midden vegetation has been described by Bell and Harcombe (1973) from the Broken Islands Group, and from elsewhere along the coast by Sawbridge and Bell (1972). The midden sites occur above the beach, along sheltered shores. The substrate consists of accumulated camp refuse, primarily mollusc shells, as well as ash, charcoal, and bones of fish, birds, and mammals. Twenty-eight middens were located in the Broken Islands section, and over a hundred plant species were found associated with them. The vegetation is for the most part open, with shrub and herb cover, and varying amounts of tree cover depending on age of the midden. Some of the typical species are: *Physocarpus capitatus*, *Sambucus racemosa*, *Urtica dioica*, *Festuca subulata*, *Elymus hirsuta*, *Aira* spp., *Ranunculus uncinatus*, *Stellaria crispa*, *Eurhynchium oreganum*, and *Plagiomnium insigne*.

Many of the species listed, especially the trees and shrubs, were important in the Nitinaht economy, or were at least recognized and named in the Nitinaht language. However, as discussed later in the section on Nitinaht plant classification, almost all of the grass species, and the bryophytes and lichens were given only a general designation and were not distinguished by individual names. Some of the herbaceous species, although common, were not named or utilized in any way, as far as could be determined. Those actually involved in the interviews but for which minimal information was obtained are included in Appendix 2.

THE ROLE OF PLANTS IN TRADITIONAL NITINAHT CULTURE

Plant Foods

At least 32 species of food plants were used by the Nitinaht people (see Table 1). Two of these, salmonberry and thimbleberry, were used both for their fruit and for their green shoots. In all, at least eight (possibly ten) species of "root"* vegetables were used (Table 1, A.), all but two being indigenous to the Nitinaht territory. The exceptions, the camas species, were obtained through trade or travel to southern or eastern Vancouver Island. All but one (possibly two) of the "roots" were cooked before being eaten, and several were dried and stored for winter use. Eel-grass rhizomes were not cooked; they were eaten raw immediately after harvesting. Poque, if used, was also eaten raw (see Appendix 2).

Four species of green vegetables were used (Table 1, B.). All were available locally, but were eaten only during a relatively short period in the spring. They were not stored for more than a few days. All were eaten raw, but one type, salmonberry sprouts, could also be steam-cooked, and were apparently preferred that way.

* Including bulbs, rhizomes, true roots and other underground parts.

TABLE 1

Nitinaht Plant Foods (In alphabetical order of scientific name, within categories delimited). X indicates use or positive notation; (X) indicates unconfirmed but probable use based on circumstantial evidence.

Species	Eaten raw	Cooked	Stored	Not found locally
A. *Roots and Other Underground Parts*				
Boschniakia hookeri (Poque)	(X)	—	—	—
Camassia leichtlinii (Great Camas)	—	X	X	X
Camassia quamash (Common Camas)	—	X	X	X
Fritillaria camschatcensis (Mission-bells)	—	(X)	—	(X)
Lilium columbianum (Tiger Lily)	—	X	X	—
Polystichum munitum (Sword Fern)	—	X	—	—
Potentilla pacifica (Pacific Cinquefoil)	—	X	X	—
Pteridium aquilinum (Bracken Fern)	—	X	X	—
Trifolium wormskioldii (Wild Clover) (2 varieties)	—	X	X	—
Zostera marina (Eel-grass)	X	—	—	—
B. *Green Vegetables—Shoots*				
Equisetum telmateia (Giant Horsetail)	X	—	—	—
Heracleum lanatum (Cow-parsnip)	X	—	—	—
Rubus parviflorus (Thimbleberry)	X	—	—	—
Rubus spectabilis (Salmonberry)	X	X	—	—
C. *Fruits*				
Arctostaphylos uva-ursi (Kinnikinnick)	(X)	—	—	—
Cornus canadensis (Bunchberry)	X	—	—	—
Fragaria chiloensis (Wild Strawberry)	X	—	—	—
Fragaria vesca (Wild Strawberry)	X	—	—	—
Fragaria virginiana (Wild Strawberry)	X	—	—	—
Gaultheria shallon (Salal)	X	X	X	—
Osmaronia cerasiformis (Indian-plum)	—	X	—	—
Pyrus fusca (Pacific Crabapple)	(X)	X	(X)	—
Ribes bracteosum (Stink Currant)	(X)	X	—	—
Ribes divaricatum (Wild Gooseberry)	X	(X)	—	—
Rosa nutkana (Wild Rose)	X	—	—	—
Rubus leucodermis (Blackcap)	X	(X)	—	X
Rubus parviflorus (Thimbleberry)	X	(X)	—	—
Rubus spectabilis (Salmonberry)	X	—	—	—
Rubus ursinus (Trailing Wild Blackberry)	X	(X)	—	—
Sambucus racemosa (Red Elderberry)	(X?)	X	X	—
Shepherdia canadensis (Soapberry)*	X	(X)	X	X
Vaccinium alaskaense (Alaska Blueberry)	X	X	X	—
Vaccinium myrtilloides (Canada Blueberry)	X	X	(X)	X
Vaccinium ovalifolium (Oval-leaved Blueberry)	X	X	X	—
Vaccinium ovatum (Evergreen Huckleberry)	X	(X)	—	—
Vaccinium oxycoccos (Bog Cranberry)	X	(X)	(X)	—
Vaccinium parvifolium (Red Huckleberry)	X	X	X	—

* The berries were not eaten straight, but whipped with water into a frothy confection called "Indian ice-cream".

TABLE 1—*Continued*

D. *Casual and Emergency Foods*

Species	Use
Blechnum spicant (Deer Fern)	Leaves chewed to alleviate hunger
Castilleja spp. (Indian Paintbrush)	Flower nectar sucked
Gaultheria shallon (Salal)	Leaves chewed to alleviate hunger
Lonicera ciliosa (Orange Honeysuckle)	Flower nectar sucked
Tsuga heterophylla (Western Hemlock)	Young shoots eaten to alleviate hunger

E. *Plants Used to Collect Herring Spawn*

Laminaria groenlandica and other, similar marine algae—fronds
Phyllospadix spp. (Surf-grasses)—leaves
Thuja plicata (Western Red Cedar)—boughs
Tsuga heterophylla (Western Hemlock)—boughs

F. *Plants Used as Sources of Drinking Water*

Alnus rubra (Red Alder)—presence indicates safe drinking water
Equisetum telmateia (Giant Horsetail)—water from hollow stalks drunk

G. *Plants Used as Tea*

Ledum groenlandicum (Labrador-tea)—leaves
Rosa nutkana (Wild Rose)—leaves

H. *Plants Used for Smoking*

Arctostaphylos uva-ursi (Kinnikinnick)—dried leaves

I. *Plants Used Around Food in Steaming Pits*

Alnus rubra (Red Alder)—leaves and branches
Athyrium filix-femina (Lady Fern)—fronds
Blechnum spicant (Deer Fern)—fronds
Dryopteris austriaca (Spiny Wood Fern)—fronds
Gaultheria shallon (Salal)—leaves and branches
Polystichum munitum (Sword Fern)—fronds
Pteridium aquilinum (Bracken Fern)—fronds
Grass, many species—clean, dry straw (also used in food-storage baskets)

Over 20 wild fruits were utilized, all but two apparently being locally available or at least relatively accessible. The two fruits obtained through trade or travel to other areas were soapberry and Canada blueberry. Almost all of the fruits could be, and were, eaten raw, but many were also cooked at least some of the time. Some, including stink currants, red elderberries, and Pacific crabapples, were almost invariably cooked. Others, including wild strawberries, wild gooseberries, wild rose hips, and salmonberries, were seldom, if ever, cooked. Most of the fruits that were cooked were also stored for winter use. Foremost among these were salal berries,* which were the single most important fruit in the Nitinaht diet. The various blueberry and huckleberry species were also very important, but none surpassed salal berries in abundance or popularity. In most instances, the fruits were prepared for storage by drying in cakes, but in the case of crabapples and bog cranberries it is likely that the Nitinaht, like other Northwest Coast groups, stored them in boxes under water or oil (Turner, 1975), although this could not be substantiated.

Three fruits for which no information could be obtained were saskatoon berry, high-bush cranberry, and trailing black currant. All are known to occur, albeit somewhat infrequently, in Nitinaht territory, and all were used by neighbouring Nootka peoples (Turner and Efrat, 1982). It seems likely that they were used in the past, but have now been forgotten.

In traditional times, most of the vegetable foods were eaten with whale or seal oil as a condiment. Recently, these oils have been largely replaced by vegetable oils, such as Mazola corn oil, but as an accompaniment to plant foods, the use of oil has virtually disappeared. Within the memory of Ida Jones and the other Nitinaht elders, first molasses, then syrup and sugar were used to sweeten most of the fruits, and were even used sometimes with the sprouts.

* The term "berry" is used in this discussion in a general, rather than botanical context. A number of the fruits termed "berries", such as salal, soapberries, strawberries, and salmonberries, are, technically speaking, other types of fleshy fruits, and not true berries.

Aside from the "root", shoot and fruit foods used by the Nitinaht, there were some species used as emergency foods and for their flower nectar (Table 1, D.), and some used for collecting herring spawn (Table 1, E.), although most of the latter were not actually eaten. Marine algae were apparently not an important component of traditional diet, although within the twentieth century, many Nitinaht and other West Coast people used to gather red laver (*Porphyra* spp.) for sale to Chinese and Japanese people living in Victoria.

Two species were used in the procurement of drinking water, two were used for beverage teas, and one for smoking (Table 1, F., G., and H.). In addition, a number of species, particularly the ferns, were harvested for use in steam-cooking pits and, more recently, steaming kettles (Table 1, I.). The leaves and branches were laid systematically over red-hot rocks (Figure 14) at the bottom of the pit, to protect the food from burning. The fern fronds were also interspersed between the layers of food in the pit to separate the different components. Vegetation was used again at the top of the pit, providing air spaces and protecting the food from dirt and sand (Turner and Kuhnlein, 1982). The accompanying vegetation must have also been significant in flavouring the food being steamed.

As already suggested, there was a definite seasonality to the harvesting of vegetable foods. Beginning in early spring, green vegetables—giant horsetail, cow-parsnip, salmonberry, and thimbleberry shoots—were the first fresh foods to be gathered, and they must have been a much appreciated addition to the winter diet. Ida Jones recalled that bundles of salmonberry sprouts were taken by Nitinaht fishermen out to the halibut banks to share with their friends and trade for other types of food. One can imagine the pleasure with which these juicy, sweet shoots were consumed out in the canoes.

Soon after the peak of the green vegetable season, the first fruits began to ripen. Salmonberries were first, followed by Alaska and oval-leaved blueberries, red huckleberries, strawberries, stink currants, gooseberries, red elderberries, thimbleberries, bunchberries, and, by late summer, salal berries. Crabapples, rose hips, and bog cranberries were ready in the fall, and, finally, in October,

Fig. 14 The type of rocks considered best for pit-cooking. Average size: 5 to 10 cm. Rocks without cracks or intrusions were selected. (Nancy J. Turner)

November, and even December, the evergreen, or winter, huckleberries, were ready, and were often picked when frozen.

Eel-grass rhizomes were gathered and eaten in the spring, and camas bulbs were obtained by trade or on trips to southern or eastern Vancouver Island, during the summer, after the flowers had faded but the seed stalks were still visible. Sword fern rootstocks were also apparently dug in the summer, but the most important local "root" crops—Pacific cinquefoil, wild clover, and bracken fern—were dug in the fall, usually in late October, after the tops had started to turn colour and die back. Logically, they can be expected to contain the highest food value at this time, after the photosynthetic activity in the leaves has ceased and before the stored reserves in the roots or rhizomes have been depleted. Nevertheless, we observed that cinquefoil roots and clover rhizomes dug in August while the tops were still green did not appear to differ markedly in flavour or size from those dug in late October. For Pacific cinquefoil, at least, the size of roots seemed to relate more to soil type and moisture regime than to the season harvested. The "root" crops could be dug, when necessary, during the winter and in early spring, but locating the plants for digging was more difficult after the tops had completely died back. Hence, the bulk of the year's supply was dug in the fall, then steam-cooked and dried for later use. By the time the new shoots started growing in the spring, the "roots" were said to become dry and tough and hence not suitable as food. Only the first-year roots of Pacific cinquefoil were used. They are yellowish on the outside and firm and white inside, whereas the second-year roots, already beginning to die, are grey outside, and pulpy and brownish within.

The gathering of vegetable foods requires a minimum of equipment. For "roots", a yew-wood digging stick, about 1 m or more long, straight and pointed or flattened and sharpened at the tip, with a rounded knob at the top, was used (Figure 15). It was inserted into the ground at several points around a clump of roots, being pushed in and pried back at each insertion, until the clump was loose enough to be pulled out. Sandy soil was considered optimal for harvesting "roots", both because the digging was easier and the soil was easily removed from the roots by shaking and washing. Once cleaned, the roots were placed in a **buxu·ɣ̓** basket, which was oblong, with a handle across the top (see section on Artifacts, p. 24).

Green shoots were generally snapped off by hand or cut off with knives. Originally, these knives would have been of California mussel shells (*Mytilus californianus* Conrad), but within the last two centuries or so, they have been metal. Fruits were simply picked by hand; those growing in clusters, including salal and evergreen huckleberry, were usually picked with the bunches intact, to be separated and cleaned of stems and foreign material later. Berries were generally harvested in

Fig. 15 John Thomas with a root-digging stick he has just carved from a piece of yew. Digging sticks averaged about one metre in length, but this varied according to the height of the person who would use the stick. Women's sticks were usually shorter than men's. (Nancy J. Turner)

large pack baskets, called **qaʔawc** (see p. 24). The harvesting of a good crop of berries, roots, sprouts, or ducks, salmon and other animal foods was often an occasion for feasting. For example, as Ida Jones recalled, when blue or red huckleberries were brought to Clo-oose or Whyac from the Port Renfrew area, where they were more plentiful, the bearers would "holler" the name of the fruit while still far out on the water, and all the villagers would gather at the place where the canoes would land to obtain their share of the harvest.

The harvesting and preparation of "root" foods is described in the following passages, which were translated from Nitinaht texts by Ida Jones. Taping and word-by-word translations were done by John Thomas. The full original texts of these passages are given in Appendix 6.

A. *Digging Roots*

"It is nearly time [October] when they used to gather **ƛicsap** [cinquefoil roots]. They watched for the time when the [cinquefoil] leaves faded away, and then they would start gathering the cinquefoil roots. When it gets to be winter, he [the gatherer] will then eat it, because he dried it, and then put it into the pack basket, the storage basket, then put it wherever it might not get mouldy. He will eat that when he eats dried fish, salmon. [There are] four kinds [of edible roots]: cinquefoil, large-leaf clover [**ʕeʕciy̓**], small-leaf clover [**naxu·**], and bracken fern [**šiƛa·**]. Four kinds for winter use, eaten then the same way as potatoes are eaten now . . .

"Next month [October] is the month for gathering cinquefoil roots by the women. They will dig as many roots as they could gather. They dig on sandy ground, as long as [there is] daylight, but not hurrying. Some women have longer digging sticks than others. She leans on it, twisting it when going into the sand, always watching how far down it goes, then she prys it [out], breaks off the sand, takes hold of the root and puts it into the pack basket. She gathers like this for many days, until she has as much as she needs for winter. Then she quits. They invited each other [to go digging], I guess so they won't be lonely or sad, because they are happy, passing on news, when they gather the roots. They put all four kinds away for winter use . . .

"If it is gathered too early, it's not ready. If the roots start to sprout new leaves, it does not taste good to eat. That is why whoever wants to gather [roots] watches. As soon as the leaf starts to sprout, he lets it go. That's how we used to do it. Maybe we still could gather [roots] that way, but we don't get a chance to gather because now we have [White man's] food so easily. We only have to go to the store and buy it, just as, long ago, the people used cinquefoil, fern roots. [They were] very prosperous because they ate the cinquefoil and fern roots, ate them with oil . . ."

B. *Cooking Roots*

"The large-leaf clover roots, the cinquefoil roots, the smaller-leaf clover roots, I used to watch [them] when I was a child. I would go with one who was digging roots. As soon as she fills her pack basket, she would go home, and then go to the fresh water and wash it, really wash it, and then, [when] she has it dripping, the sun shines, and then she dries it on a sheet or mat on the ground. She watched it until it was properly dried, along the length of it, and then she started digging down at the beach. At the sandy beach, [the hole] was dug deep because it's shared by many. It was known which bundles belonged to whom by the way the bundles were tied in the middle. The fern roots were wrapped around very tightly, tied on both ends, so they wouldn't come apart.

"A fire was started inside that big hole on the beach. They already have bracken fronds, deer fern fronds [?], lady fern fronds at the beach, and lots of salal bushes. Then, when the fire has been burning from early morning until noon, and it looks ready, the rocks red-hot, the fire is poked off. The fern fronds [and salal branches] are spread [over the rocks] in racks, and [the roots] put inside, one person's facing one way, another person's facing the other direction. Then another layer of fern fronds, salal bushes, then again the roots stacked, two layers to a stack . . . camas bulbs, too, [and] big-leaf clover, small-leaf clover, bracken fern . . . until the pit is full. At the middle is a large, round post inserted down to where the fire was. The food is placed in up to the top of the post, and a mat of inner cedar bark is placed over top. As soon as it became full, she took water, lots of water, all ready for pouring on, and poured it into the centre of the pit [where the post

was]. Four, five, sometimes seven buckets full were poured in very, very quickly, and [the pit was] covered with the remainder of the bracken fronds, lots of them. Then the cedar-bark mat was weighted down [at the edges] so that it became airtight, and then sand was poured on top. Now there was no place where the steam might leak out; it was all closed up. It now formed a high mound on the beach, and was banked on the sides.

"It remained overnight, and at noon time, or past noon, on the next day, it was uncovered, and [the food] was cooked. Whoever owned them would recognize her's by the tie used in the middle of her bundles. Everyone knew how her knot is tied. Then she spreads a very clean cedar-bark mat on a board laid flat on the beach, and dumps her roots on top of it and sorts each kind—camas, small-leaf clover, all sorted. There is sunshine and a slight breeze. As soon as they are all really dried, then whoever owns them takes them and [puts them in a] big open-weave basket, like a qaʔawc basket, but with handles on the sides. In between she puts dried up, yellowish grass. There is no dampness, or it might get mouldy. It is put up on a big, wide board up [near the roof] in the house where it's smokey. Wa-a-a-ay over there, all lined up side by side.

"She will take down as much as she needs, however much they eat, then cook it in pots with grass in the bottom and a small amount of water—steaming, what the White man calls steaming. It is done quickly because it's already cooked, and she took a wooden plate and dumped it on, where it is then eaten at the end of a meal. It is squeezed into balls and then dipped into oil. This oil is eaten with it. That is the end."

Further information on pit-steaming can be found in the species inventory, under the various species having edible "roots", as well as under salmonberry, whose sprouts were pit-cooked.

Berries were apparently traditionally cooked in kerfed, cedar-wood, boxes. Red-hot rocks would be added to the fruit and it was allowed to simmer until it was jam-like in consistency. It is unclear whether fruits, such as salal, were cooked before being dried, but apparently this was not necessary. The berries were simply mashed while fresh, then spread on skunk-cabbage leaves or mats, or on boards to dry in the sun. Dried berry cakes, like dried roots, were stored in large cedar-bark storage baskets on shelves near the ceiling of a house, and were interspersed with dried grass to allow air circulation and prevent moulding.

It is difficult to assess the nutritional contribution of vegetable foods in the original Nitinaht diet. It could be expected to be significant, however, both in terms of caloric input and the addition of essential vitamins and minerals. Little research has been done on nutritional content of indigenous plant foods. Table 2 presents some selected nutritional data for species used by the Nitinaht. From these data, it can be concluded that plant foods were a vital component of the original diet, and should be further studied in terms of the contribution they might make to the present diet. In a separate study, already mentioned, the nutritional content of the important "root" foods, in both raw and cooked state, is being investigated in collaboration with Dr. Harriet V. Kuhnlein, nutritionist at the University of British Columbia (cf. Kuhnlein *et al.*, 1982; Turner and Kuhnlein, 1982).

TABLE 2

Nutrient Composition of Some Indigenous Plant Foods Used by the Nitinaht (per 100 gm edible portion)

Species	Moisture %	Calories (est.)	Protein gm	Carbohyd. gm	Ash gm	Lipid gm	Ca mg	Fe mg	Mg mg	Zn mg	Ascorbic Acid mg
Camassia quamash[1] (Blue Camas)—fresh bulbs	70.0	113	0.7	27.1	2.0	0.2	—	—	—	—	4
C. quamash[2]—fresh bulbs	61.8	149	5.0	30.7	1.2	1.3	63.7	8.8	15.2	1.0	—
Gaultheria shallon[2] (Salal)—fresh fruit[3]	82.6	63.4	2.1	14.0	0.6	0.7	52.6	0.7	14.1	0.6	68.5
G. shallon—dried fruit[2]	19.7	281.8	5.0	71.3	3.0	1.0	276.4	3.6	16.8	1.2	570.0
Vaccinium ovatum[2] (Evergreen Huckleberry)—fresh fruit[3]	86.6	48.0	1.9	11.0	0.2	0.2	21.5	0.5	7.1	0.2	43.7
V. ovatum—dried fruit[2]	24.5	265.8	4.4	69.5	1.5	0.1	131.5	1.4	15.6	0.9	289.7
Vaccinium parvifolium[2] (Red Huckleberry)—fresh fruit[4]	88.4	43.5	1.9	9.0	0.2	0.5	20.6	0.4	5.8	0.2	28.6
Rubus spectabilis[2] (Salmonberry)—fresh fruit	92.6	27.7	2.6	4.4	0.05	0.4	16.7	0.4	14.2	0.4	27.5
Rubus parviflorus[2] (Thimbleberry)—fresh fruit	69.8	109.5	3.1	24.7	1.1	1.2	129.2	0.9	19.6	0.7	78.0
Rubus ursinus[2] (Trailing Wild Blackberry)—fresh fruit	85.9	52.8	2.5	10.1	0.6	0.9	49.8	0.6	18.8	0.4	28.3
Sambucus racemosa[2] (Red Elderberry)—fresh fruit	84.8	56.5	2.6	11.0	0.6	0.9	54.2	1.0	15.1	0.4	81.0
Heracleum lanatum[2] (Cowparsnip)—fresh shoots	—	—	—	—	—	—	—	—	—	—	60.0
Rubus spectabilis[2] (Salmonberry)—fresh shoots[3]	—	—	—	—	—	—	—	—	—	—	29.6
Rubus parviflorus[2] (Thimbleberry)—fresh shoots[3]	—	—	—	—	—	—	—	—	—	—	21.7

[1] From Benson *et al.* (1973).

[2] From Keely (1980). Figures have been rounded off to the first decimal. Standard deviations for triplicate aliqots of each composite sample analyzed are not included here, but are given in original source.

[3] Figures are averaged from two composite samples, shown separately in original source.

[4] Figures are averaged from three composite samples, shown separately in original source.

Fig. 16 This giant log of Sitka spruce illustrates the importance of fuel. The log, owned by Willie Jones, was dragged up from the shore at Clo-oose in the 1930s, to be cut up for firewood. (Present were, from left: on the log — Martin Fred, Nicol Chester, Cecil Shaw, Leo Thomas, Gilbert Livingstone, Ralph Edgar, and Walter Shaw; standing — Willie Jack, Ray Jones with his dog, Joe Jones, Joshua Edgar, Alfred Livingstone, and Jimmy Chester.) (PABC)

Plant Materials

Over 50 species of plants were used in some capacity in traditional Nitinaht technology (See Table 3 for a list). The wood of over 20 types of trees and shrubs was used in manufacture, and at least four species were noted as sources of fuel (Table 3, A. and B.) (Figure 16). Over 16 species were used for their fibrous tissues, for making twine, ropes, clothing, mats, and baskets (Table 3, C.). Seven species were noted as sources of dyes, stains and paints (Table 3, D.), and two as sources of pitch (Table 3, E.). Twelve or more species were used as scents, cleansing agents, or scrubbers for young people in training (Table 3, F.). Additionally, over 20 species, including a number of mosses and lichens, were used for a variety of other purposes, from wrapping food and wiping salmon to making children's playthings (Table 3, G.).

TABLE 3

Nitinaht Plant Materials Encountered in This Study (in alphabetical order of scientific name, within categories delimited)

A. *Woods, for Implements, Containers, and Construction*

Abies spp. (Amabilis Fir and Grand Fir)—knots for halibut hooks
Acer circinatum (Vine Maple)—bows, containers, branches for weir construction
Acer macrophyllum (Bigleaf Maple)—masks, rattles, paddles, (bowls)
Alnus rubra (Red Alder)—masks, (bowls), rattles, bailers, model canoes
Chamaecyparis nootkatensis (Yellow Cedar)—paddles, charcoal-mixing boxes and other items
Holodiscus discolor (Oceanspray)—needles, spear shafts, barbecue sticks, practice bows
Menziesia ferruginea (False Azalea)—sling-shots (apparently recent)
Oplopanax horridus (Devil's Club)—fishing lures
Picea sitchensis (Sitka Spruce)—upper prong of salmon and seal spears
Pinus spp. (Shore Pine, and White Pine)—model totem poles, model canoes, and other small items (apparently recent uses)
Populus balsamifera ssp. *trichocarpa* (Black Cottonwood)—knots for halibut hooks
Pseudotsuga menziesii var. *menziesii* (Douglas-fir)—knots for halibut hooks; wood for spear shafts
Pyrus fusca (Pacific Crabapple)—digging sticks, gaffs
Rhamnus purshiana (Cascara)—D-adze handles
Rubus spectabilis (Salmonberry)—practice bows
Salix spp. (Willows)—barbecue sticks
Sambucus racemosa (Red Elderberry)—whistles
Taxus brevifolia (Western Yew)—digging sticks, prying sticks, needles, mat-pressers, bows, wedges, clubs, paddles, spear prongs, whaling harpoon shafts, fishing weir posts
Thuja plicata (Western Red Cedar)—canoes, houseposts, houseboards, fish traps, boxes, arrow shafts, gaff sticks, salmon spreaders
Tsuga heterophylla (Western Hemlock)—knots for halibut hooks, spreaders for fishing apparatus

B. *Woods for Fuel* (Many species were used, but those listed were of specific importance)

Alnus rubra (Red Alder)—smoking and drying fish
Chamaecyparis nootkatensis (Yellow Cedar)—fire drill; inner bark for tinder
Picea sitchensis (Sitka Spruce)—wood as general fuel
Pseudotsuga menziesii var. *menziesii* (Douglas-fir)—wood and bark good all-around fuels

C. *Fibres, for Ropes, Fishing Lines, Binding, Baskets, Mats, Clothing*

Carex obnupta (Tall Basket Sedge)—leaves for wrapped, twined baskets
Chamaecyparis nootkatensis (Yellow Cedar)—inner bark for blankets, clothing, hats
Cirsium spp. (Thistles)—downy pappus sometimes spun with cedar inner bark to add softness
Elymus mollis (American Dune Grass)—tough leaves for sewing (possibly only by children)
Nereocystis luetkeana (Bull Kelp)—stipes for fishing lines
Phyllospadix torreyi (Surf-grass)—leaves in basketry(?)
Picea sitchensis (Sitka Spruce)—split roots for twining baskets and binding
Populus balsamifera ssp. *trichocarpa* (Black Cottonwood)—inner bark spun with inner cedar bark and nettle fibre to add strength
Prunus emarginata (Bitter Cherry)—bark strips used for binding the joints of implements
Raphia sp. (Raphia)—leaf strips for twining in wrapped, twined baskets (introduced; obtained through commercial outlets)
Scirpus americanus (Three-cornered "Grass")—stems as "ribs" in wrapped, twined baskets

TABLE 3—*Continued*

Scirpus acutus (Tule)—stems for mats
Thuja plicata (Western Red Cedar)—inner bark for mats, baskets, clothing, ropes, ornaments; withes for ropes, ties, fish traps, basket frames
Typha latifolia (Cat-tail)—leaves for mats
Urtica dioica (Stinging Nettle)—stem fibre for twine, fishing lines, and fishing and duck nets
Xerophyllum tenax (Bear-grass)—leaves for twining wrapped, twined baskets (not available locally; obtained from Makah and Quileute in Washington)

D. *Dyes, Stains, and Paints*

Alnus rubra (Red Alder)—bark for reddish dyes
Gaultheria shallon (Salal)—leaves for yellowish pigment or dye
Mahonia spp. (Oregon-grapes)—bark of stems and roots for yellow dye
Oplopanax horridus (Devil's-club)—wood charcoal for special ceremonial face paint or colouring
Populus balsamifera ssp. *trichocarpa* (Black Cottonwood)—bud resin used as a paint base
Tsuga heterophylla (Western Hemlock)—bark used for dyes, ranging in colour from light brown to black

E. *Resin or Pitch, as Protective Coating*

Picea sitchensis (Sitka Spruce)
Pinus spp. (Shore Pine and White Pine)

F. *Scents and Cleansing Agents*

Artemisia suksdorfii (Suksdorf's Mugwort)—stems and leaves sometimes hung in house for their scent
Elymus mollis (American Dune Grass)—roots used as scrubbers in manhood training
Galium triflorum (Sweet-scented Bedstraw)—infusion used as hair wash
Populus balsamifera ssp. *trichocarpa* (Black Cottonwood)—bud resin used to scent skin salve of deer fat
Pinus spp. (Shore Pine and White Pine)—pitch sometimes used to scent skin salve of deer fat
Salix sp. (River Willow)—roots used as scrubbers for children
Taxus brevifolia (Western Yew)—branches used as scrubbers in manhood training
Thuja plicata (Western Red Cedar)—boughs used as scrubbers in manhood training
Tsuga heterophylla (Western Hemlock)—boughs used as scrubbers in manhood training
Urtica dioica (Stinging Nettle)—greens rubbed on fishing gear to eliminate human scent (may be Makah use only)
Vicia gigantea (Giant Vetch)—greens rubbed on fishing lines and on a fisherman's hands to eliminate human scent

G. *Other Uses* (see also Table 1, I. for Plants used in Steaming Pits)

Alectoria sarmentosa, Usnea longissima, and other lichens—for wiping fish, wound dressings, towelling, diapers, etc.
Anaphalis margaritacea (Pearly Everlasting)—for softening hands
Angelica genuflexa (Kneeling Angelica)—inflated leafstalks for children's toys
Castilleja spp. (Indian Paintbrush)—trapping hummingbirds
Heracleum lanatum (Cow-parsnip)—inflated leafstalks for children's toys
Lessoniopsis littoralis—holdfast for "beach hockey" ball
Lysichiton americanum (Skunk-cabbage)—leaves for berry-drying, "plates", makeshift cups and berry containers
Nereocystis luetkeana (Bull Kelp)—stipe and float for oil container; float as mold for deer-fat cosmetic, and halibut hook container in molding process; leaves to cover fish in canoe
Picea sitchensis (Sitka Spruce)—boughs for ceremonial dance costumes, and for "scaring" at dances
Polystichum munitum (Sword Fern)—placemat for food; fronds used in **pila-pila** game
Postelsia palmaeformis (Sea Palm)—holdfast for "beach hockey" ball
Pteridium aquilinum (Bracken Fern)—fronds for bedding
Sphagnum spp., and other mosses—for wiping fish, wound dressings, towelling, diapers, etc.

As can be seen from Table 3, many plants were used for more than one purpose. Western hemlock, for example, was used for its wood (knots for halibut hooks, spreaders), as a source of dye (from the bark), and as a scrubber in manhood training (the boughs). Similarly, devil's-club was used for its wood, which was carved into fishing lures, and for its charcoal, which was used as a face paint for dancers. By far the most important species in Nitinaht technology, however, was western red cedar, whose wood was used for canoes, houseposts, houseboards, and numerous smaller items; whose young branches, or withes, were used for ropes and in basketry; and whose inner bark was used for mats, baskets, clothing, ropes and ornaments. These uses are discussed in detail in the species inventory (see under *Thuja plicata*). Red cedar boughs were also used as scrubbers by young men in training.

Since almost all implements, containers, and other manufactured items used by the Nitinaht involve the use of plant products, it seems appropriate to provide a list of some of the important artifacts used, with an indication of the materials they were comprised of and other notable features. For convenience, these artifacts are discussed in alphabetical order of their English names. The list of artifacts and discussions about them is in no way intended to be exhaustive in coverage. Rather, it is provided as a compilation of scattered information given in other parts of the text. In most cases the reader can learn more about an item by referring to the species inventory under the plant species used in making it. Unless otherwise noted, the information in this section was provided by John Thomas.

Arrows—The shaft was usually made of western red cedar. The length averaged 0.8 m (2½ ft.). The shaft was bound at both ends with strips of bitter cherry bark and there were two or three feather stabilizers. The tip was traditionally of mussel shell treated with oil, and was removable so that the points could be easily replaced; one usually kept several as spares. The tip of the shaft where the point was fitted was grooved, and the cherry-bark binding passed through the groove once to protect it (see Fig. 17). Arrows were usually attached to a line of 7 m (24 ft.) or more in length, so that it could be pulled back, if, for example, a duck were shot with it.

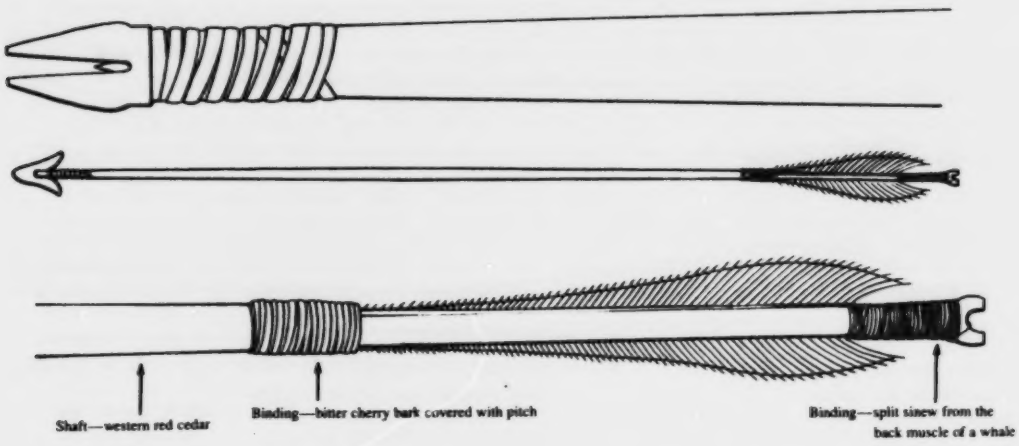
Shaft—western red cedar
Binding—bitter cherry bark covered with pitch
Binding—split sinew from the back muscle of a whale

Fig. 17 Arrow of the type used by Nitinaht and Nootka people. Three feather stabilizers, rather than two as shown, were apparently more common according to ethnologists at the British Columbia Provincial Museum. (Drawing by Elizabeth J. Stephen)

Baskets—At least seven types of baskets were used by the Nitinaht; all but one were made by them. These included three types of large storage baskets, all made from thick, wide strips of inner bark of western red cedar, and all woven in a checkerboard pattern, or variations on this pattern. The largest, called **ƛapa·t**, could be up to 1.2 m (4 ft.) square and 0.5 m (18 in.) deep, although most were smaller than this. Largest **ƛapa·t** baskets could hold up to one hundred dried dog salmon. A second type was called **ɬaʔa·š**. It was more bag-like, and was used for storing coiled line used in whaling (Thomas and Hess, 1978). A third storage basket, smaller than the two previous types, was **ƛituqʷsc**, and was used years ago for storing clothing and other dry goods.

At least two types of carrying baskets were used. The larger, called **qaʔawc**, varied in size, but the largest might be as much as 0.6 m (2 ft.) long, slightly less in width, and about 0.8 m (2 ft., 6 in.) deep. The bottom was small, and the sides flared outwards. This pack basket was carried on the back by a tumpline and was used to carry berries and other food items. The second type was an oblong utility basket called **buxu·ẏ**. It was about 0.6 m (2 ft.) long, 40 cm (15 in.) wide, and 25 cm (10 in.) deep. It was carried by a handle strung across the centre. Both

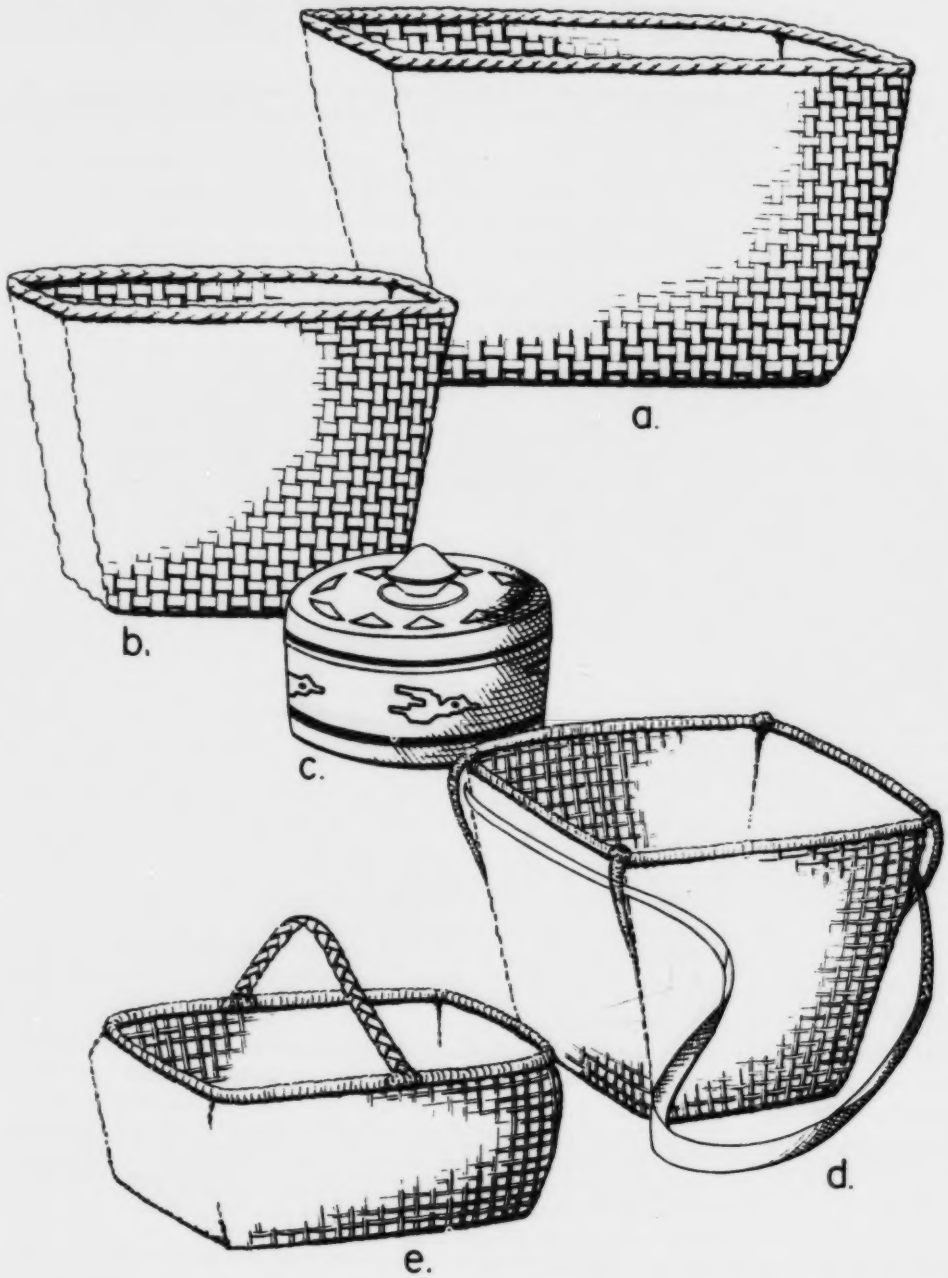

Fig. 18 Shapes of common Nitinaht baskets (scale not exact).
a—X̌apa·t; b—ɬa?a·ɨ; c—puku?; d—qa?awc; e—buxu·ɣ.
(Drawing by Elizabeth J. Stephen)

of these were of open-wrap twine, with the warp of red cedar withes, a passive weft of either cedar withe or split Sitka spruce root, and an active weft (i.e., the twined part) of split Sitka spruce root. A third type of open-wrap twine basket, collected at Nitinaht Lake, is found in the collections of the Ethnology Division of the British Columbia Provincial Museum. It is upright, flat-bottomed, and circular in horizontal cross-section, with straight sides (A. Laforet, pers. comm.). Additionally, John Thomas recalled another type of open-work basket made from cattail leaves.

Another type of basket, perhaps the best known among the non-Indian population, is called **puku?**, or **puk^{w}?u·**. In traditional form it is round, and fitted with a lid. It ranges in size from only a few cm across to 30 cm (12 in.), and is usually slightly shallower than it is wide. The weave is wrapped twining. The foundation and rim are usually of inner red cedar bark, but sometimes the foundation, or warp, is of three-cornered "grass" (*Scirpus americanus*). The twining material is of the leaves of tall basket sedge (*Carex obnupta*), or sometimes of bear-grass. Recently, raphia strands have been used in twining around the bottom and rim. Patterns of animal or geometric motif are woven into **puku?** baskets with dyed strands of twining material, usually of the same kind, whether basket sedge or bear-grass, as was used in the main weave. Formerly, **puku?** baskets were used to hold cosmetics such as deer fat tallow or a powder made of mussel shell shavings (put on the body for protection against sunburn, or used as a lubricant for the skin in rope- and twine-making) (Thomas and Hess, 1978). Nowadays, they are made mostly for sale to tourists and other non-Nitinahts, and are basically ornamental rather than utilitarian.

As noted by Thomas and Hess (1978), none of the Nitinaht baskets was made to be watertight. Nitinaht water containers were either of wood or made from the bladder of seal or codfish. However, yet another type of basket, called **ƛaʕašabɬ** (lit. 'wrapped spherical/chunky object'), was obtained through trade from the Coast Salish. It was round and shallow, like a large salad bowl. According to JT, it was made of Sitka spruce root, but more likely, it was of western red cedar root, because this is the usual material for Salish coiled baskets (A. Laforet, pers. comm.). The relative shapes of the various Nitinaht basket types are shown in Figure 18.

Bows—Nitinaht bows were generally made of western yew, and averaged about 1.2 m (4 ft.) long. Sometimes Pacific crabapple or vine maple was used, and children's practice bows were usually made from the wood of either oceanspray or salmonberry. The bow was tapered and notched at each end, and at the centre was a narrower part where the hand would grip. This was often wrapped with bitter cherry bark. In cross section, the bow was slightly grooved along the inner surface. The string was of sinew, and was attached permanently at one end of the bow, by means of a clove-hitch knot. The other end was measured and a loop tied with a bowline at the point where it would be attached when strung. The bow was threaded through the loop, and was strung only when one was ready to shoot. Then, the attached end was placed on the ground, with the outer mid-section against the knee, and the loop pushed upwards with the hand until it slipped into place. To unstring the bow, it was placed with the string closest to the user of the bow, then carefully bent until the loop slipped free of the notch and slid down the bow. (See Figures 19 and 20).

Boxes—At least four types of boxes were made and used by the Nitinaht (Thomas and Hess, 1978). Three were kerfed boxes, made by grooving a board crosswise along three parallel lines, then steaming and bending it at the grooves to form the four sides of a box, sewing or pegging the fourth corner and fitting on a bottom and lid. The two larger types, always of western red cedar, were called **ƛaɣi·qs** (lit. 'flat-sided vessel'), and **ƛu·ba·ɣs** (lit. 'hot/warm vessel'—today also applied to 'hot water'). The first box was used for storing clothing, fishing gear, and other items, and the second for cooking berries and other food items. A third, smaller box, also kerfed, but apparently sometimes made of yellow cedar instead of red cedar, was called **bixiča̓qsc** (cf. **bixiča·?bc** 'charcoal'), and was used for mixing charcoal face paint. The charcoal, usually of devil's-club, was mixed in this box with ratfish liver oil. The resulting paint, paste-like in consistency, was used during ceremonial occasions, but only by those who had inherited the right to use it.

A fourth type of box, which could also be called a bowl, was called **ƛaqsac** or **ƛatuk^{w}sc**, and was used for holding seal or whale oil. It was made almost exclusively from the wood of

Fig. 19 Yew wood bow, of the type used by Nootka and Nitinaht. Grip is wrapped with bitter cherry bark; string is of twisted gut. (Collected in 1911 by C. F. Newcombe). (Ethnology Division, BCPM)

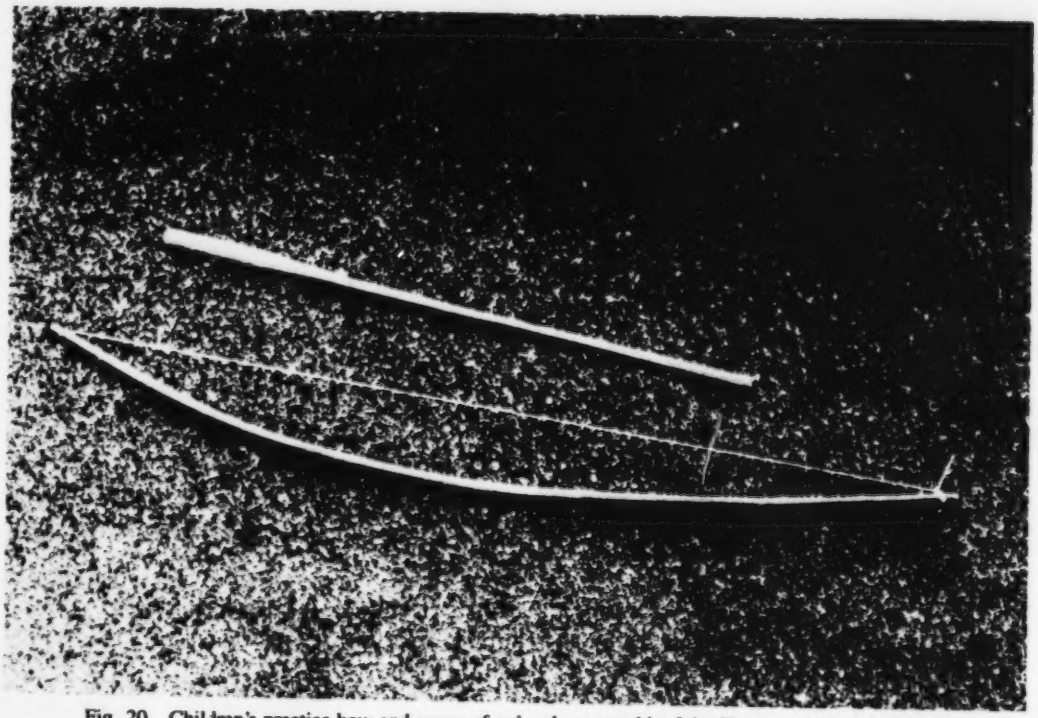

Fig. 20 Children's practice bow and arrow of red cedar; carved by John Thomas. (Nancy J. Turner)

vine maple, which was said to be the only wood that would not be penetrated by the oil used as a condiment for cooked "roots", dried salmon, and other foods. This box was carved from one piece of wood, and hence its size was limited by the size of the vine maple, usually a relatively small tree.

Canoes—Canoes are also discussed in the species inventory section, under western red cedar *(Thuja plicata)*, which was the usual material for these vessels. Arima (1975, 1975-76, 1982) provides detailed descriptions of the types of canoes used by the Nitinaht. Canoes ranged in size from those that would carry two people to those that might carry as many as 40 (see Figures 21 and 22). In the photographic collection of the Ethnology Division, British Columbia Provincial Museum, is a series of photographs of a mammoth canoe that was made in the Nitinaht area and

Fig. 21 Modern style dugout canoe being carved by Frank Knighten, John Thomas' cousin; 1950. (Ethnology Division, BCPM; W. H. Gold Photo)

designed to carry 50 or more people from Nitinaht territory to Neah Bay, Washington. However, once it was carved out and tested, it was found to be unseaworthy, and hence was left where it was pulled out and never was used.

Occasionally dugouts were made from yellow cedar, but these were inclined to split.

Clothing—Clothing, including hats, capes, skirts and aprons, was made almost exclusively of plant fibres (see Figure 23). Hats, called **ciya·pxʷs**, were usually traditionally made of finely split, wrap-twined inner bark of western red cedar, but lately, for the tourist trade, women have started making them out of the same type of materials used for the **puku?** baskets, particularly the leaves of the tall basket sedge *(Carex obnupta)*, with "ribs" of cedar bark or three-cornered "grass" *(Scirpus americanus)*. Properly made, the cedar-bark hats were waterproof. The most usual type of hat, worn by the majority of people, was called **čupqkuxʷseyk**. It was relatively flat but conical. A chief's hat, called **yučkqi·**, had a cone-shaped projection at the top.

Capes could also be made of spun inner bark of red cedar, but the inner bark of yellow cedar, being softer, was considered a better material. Skirts and aprons also could be either of the inner bark of red or yellow cedar, but the latter was preferred. Cat-tail leaves were also used for skirts. Sometimes other fibres, such as dog wool, thistle down, or the bast fibre of cottonwood, were spun together with cedar bark to add softness, particularly for babies' clothing. Blankets, called **qʷa·čid**, were also made of these materials and, as with clothing, the inner bark of yellow cedar was preferred.

Dishes—Several types of dishes were used. One was a large feast dish, called **ha·waksc**. It was made of western red cedar, and was about 1 m (3 ft.) long, 0.3 m (1 ft.) wide, and 0.5 m (1 ft., 6 in.) deep. It had a special use; it was taken along by those going to invite a chief to a potlatch and, as an official acknowledgement of the invitation, the invited guest would fill this dish with food to send back to his host-to-be. Other, smaller bowls for eating and drinking were made from harder woods, particularly vine maple, whose name, **daqcapt**, translates as 'drinking-

Fig. 22 Dugout canoes were an important mode of transportation on the West Coast until just a few decades ago. Here, about 1950, people from Clo-oose are collecting freight from the Canadian Pacific steamship *Princess Maquinna*. (B.C. Government Photograph)

Fig. 23 The late Sarah Touchie, from Sechaht, models a hat and cape of the style worn by Nootka and Nitinaht people, as she works with the bark of red cedar; 1951. (Ethnology Division, BCPM; R. Kenkham Photo)

bowl plant'. Undoubtedly, red alder and bigleaf maple were also used for bowls, as they were by neighbouring groups (cf. Turner and Efrat, 1982), although this use was not specified by JT.

Temporary "plates", on which to lay fish and other food, were made from skunk-cabbage leaves, and sword fern fronds were laid several layers thick as "place mats".

Gaffs—Gaffs were used to pull salmon from the fish traps into the canoe. They were called **ḵuc̓ak**, and could be made of a single piece of crabapple wood, with an attached branch forming a natural hook, or from a shaft of red cedar, Douglas-fir, or some other type of wood, with a piece of yew or bone lashed on with Sitka spruce root. The joint might be covered with a binding of bitter cherry bark, but this was not necessary. The fisherman would try to insert the gaff into the operculum of the fish, so as not to damage the fish. The "hook" part was not dull, but not particularly sharp either.

Harpoons, for Whaling—(Salmon and sea mammal harpoons are described under *Spears*.) Whaling harpoons consisted of a detachable head, a lanyard made of twisted whale-back sinew, and a shaft. The head, called **kʷi·qa·bɬ** (Thomas and Hess, 1978), was made up of a razor-sharp tip of oil-treated California mussel shell, about 5 cm (2 in.) long, and two valves of elk antler, each about 15 cm (6 in.) long. The valves were flattened on their inner surface and recessed at the upper ends to allow the mussel shell to fit snugly between them. Sitka spruce pitch apparently served as a glue to help hold the pieces together. A line was fitted into the lower ends of the valves. The valves were then tightly bound around the centre portion with sinew and often bitter cherry bark. The entire head, except the tip and edges of the mussel shell and the valve spurs,

Fig. 24 Head and lanyard of sinew of a whaling harpoon of the type used by Nitinaht and Nootka whalers. Collected by C. F. Newcombe in 1912 at Barkley Sound. (Ethnology Division, BCPM)

were covered with a thick coating of pitch (see Figure 24). Should the mussel shell tip be broken or lost in use, a new one could be inserted relatively easily without dismantling the entire head. Thomas and Hess (1978) give a slightly different description, stating that the valves and mussel shell tip are fixed together with one or two dowels, as is usual for the relatively modern sealing harpoon head, but this is not according to the usual design of traditional west coast whaling harpoon heads (A. Hoover, British Columbia Provincial Museum, pers. comm., 1982). The head was stored in a special purse-like container, called **ba·kidkʷš**, made from a solid sheet of the inner bark of red cedar.

The shaft, called **dupiyaq̓**, is made of yew, in two to five sections, scarfed and bound together to form a single length of about 5 m (3 fathoms). The binding material is, again, cherry bark (see Figure 25). The sinew lanyard is about 7 m (4 fathoms), and is attached to a rope, of red cedar withes, called **su·buqʷa·ʔdɬ**. The ends of the lanyard and cedar-withe rope were looped, and held together by a yew-wood pin. As long as the lines were kept taut, the pin stayed in place and held them together but if they were allowed to slacken, the pin would drop out and separate them. Hence, in an emergency, a whaler could detach his canoe from the harpoon without losing his cedar-withe rope. This latter was some 75 m (40 fathoms) long, and about 2–3 cm (slightly over an inch) thick. (For further information on its construction, see under western red cedar, *Thuja plicata* in the species inventory section).

Hooks, for Halibut—The halibut hook, called **čibuʔd**, was molded from a section of knot from western hemlock, "balsam" (grand or amabilis) fir, Douglas-fir, or cottonwood (Figure 26). Sitka spruce knots were not used because they were said not to hold the shape when wet (JT; Arima, 1975-76). Additionally, Swan (1870) suggested that spruce knots were not used by the Makah because they were too pitchy, and the fish would not bite at a hook of spruce. A suitable knot, from a rotten log, or even from the beach or a river's edge, was selected and cut longitudinally into quarters (JT), or in thirds or halves if it were too thin to yield four pieces

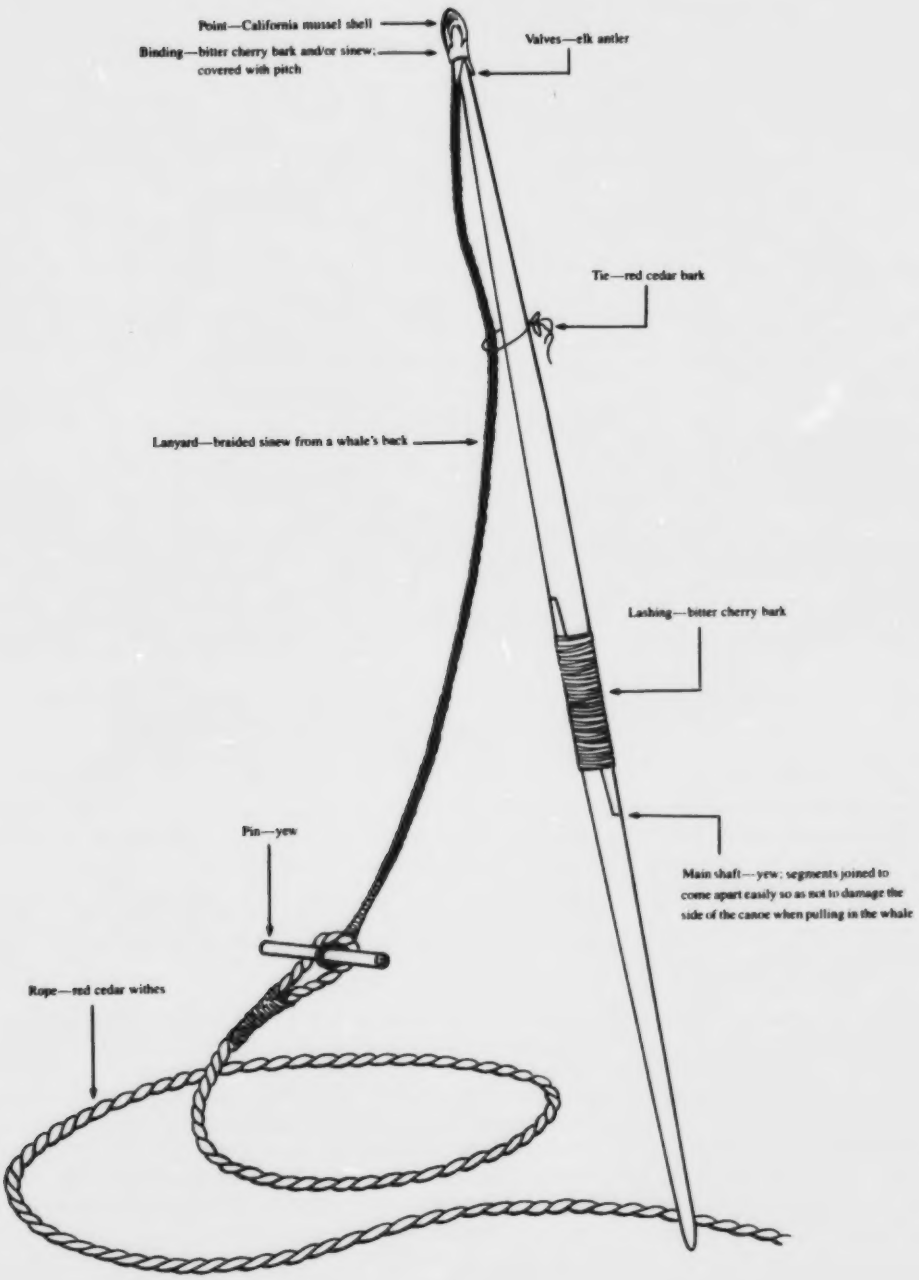
Point—California mussel shell
Binding—bitter cherry bark and/or sinew; covered with pitch
Valves—elk antler
Tie—red cedar bark
Lanyard—braided sinew from a whale's back
Lashing—bitter cherry bark
Pin—yew
Main shaft—yew; segments joined to come apart easily so as not to damage the side of the canoe when pulling in the whale
Rope—red cedar withes

Fig. 25 Nitinaht whaling harpoon, about 5 m long (scale not exact). (Drawing by Elizabeth J. Stephen)

Fig. 26 Knots of western hemlock, from rotten log, suitable for making molded halibut hooks. The top one is unaltered, the bottom one trimmed before being quartered and shaped. (Nancy J. Turner)

(Arima, 1976-76). Each piece was carved to the proper shape—flattened on the top and curved on the bottom. Each would be about 20 cm (8 in.) in length, according to JT, being measured by the span of an outstretched hand, from tip of thumb to tip of small finger. Arima (1975-76) states that a medium sized hook, about 11 cm (4.5 in.) long in bent form, was made from a piece about 28 cm (11 in.) long. The pieces were placed into a bulb-end of bull kelp *(Nereocystis luetkeana),* along with a small amount of water (Figure 27). The kelp head had enough stem left on it to be "several inches" longer than the hook pieces. Four or five (sometimes even six) hook shank pieces, wrapped in cedar bark to prevent splitting, were placed in the kelp (Arima, 1975-76). The cut end of the kelp was plugged by a snuggly fitting piece of wood or a wad of moss and the entire unit was buried upright in the hot sand near a fire. The position had to be carefully judged, since if the sand were too hot, the kelp would dry out and the hook pieces burn, whereas if it were too cool, the pieces would not steam properly and would not bend.

The kelp was left intact overnight, and then in the morning, the hook shank pieces were taken out and tested for flexibility by bending with the hands around the knee. If a piece was not yet flexible enough, it was replaced in the kelp bulb for further steaming. Those that were ready were carefully bent to an ox-bow shape, with the two ends slightly converging, then flaring again at the tips. The bent hook was placed in a mold carved to the right shape, then left to cool and dry. It was then scorched until lightly blackened with a small torch of cedar splints, said to help retain the bent shape. The burnt part was scraped off. No pitch was used as waterproofing; the fish would smell it and not take the hook (JT; Arima, 1975-76; Stewart, 1977—both the last were from accounts by CJ) (Figure 28).

Arima (1975-76) provides considerable detail on the final stages of construction of the halibut hook. A barb of bone, or recently metal, was set in a slot cut at the bottom end of the shank. The space between the tip of the barb and the closest part of the upper arm of the shank was carefully measured to the thickness of the second phalange of the thumb. The barb was securely bound in place with fine line of split spruce root. The fine wrapping was covered by a second layer of more coarsely split root, which generally extended along the lower part of the

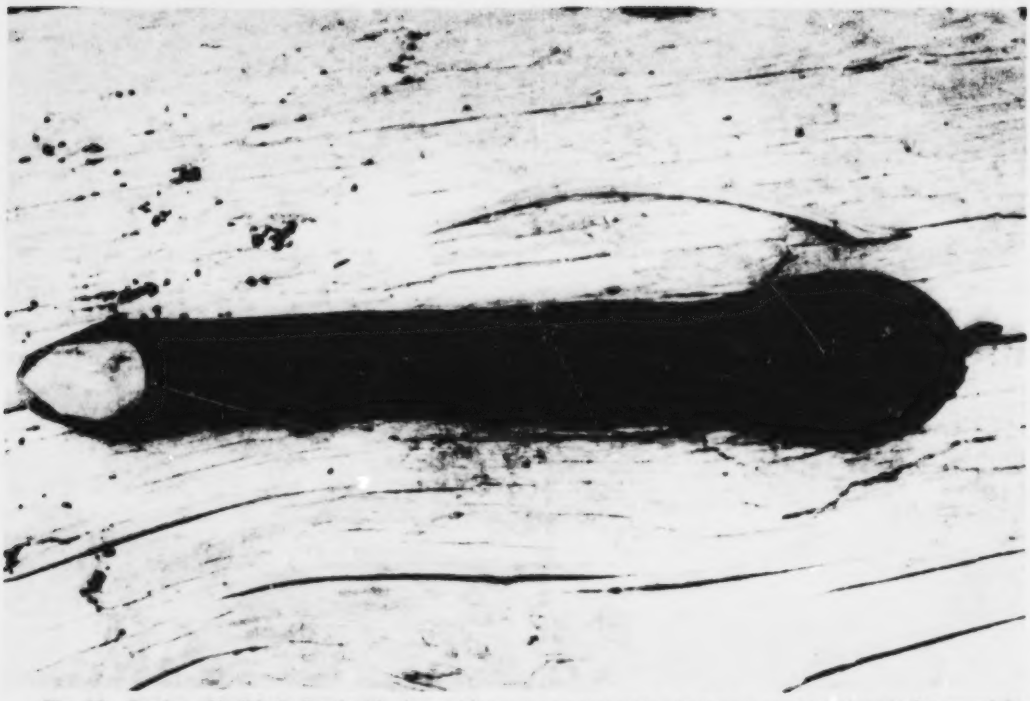

Fig. 27 Section of bull kelp fitted with plug, with quarter section of hemlock knot carved and ready for overnight steaming before being molded into halibut hook. Length of knot section is about 20 cm. (Nancy J. Turner)

Fig. 28 Finished molded halibut hook of the style used by Nootka and Nitinaht. This specimen, collected at Dodge's Cove in 1912 by C. F. Newcombe, is said to be made of spruce knot, although the Nitinaht apparently did not use spruce for these hooks. The barb is of bone, and the lashing apparently of spruce root. String is modern. (Ethnology Division, BCPM)

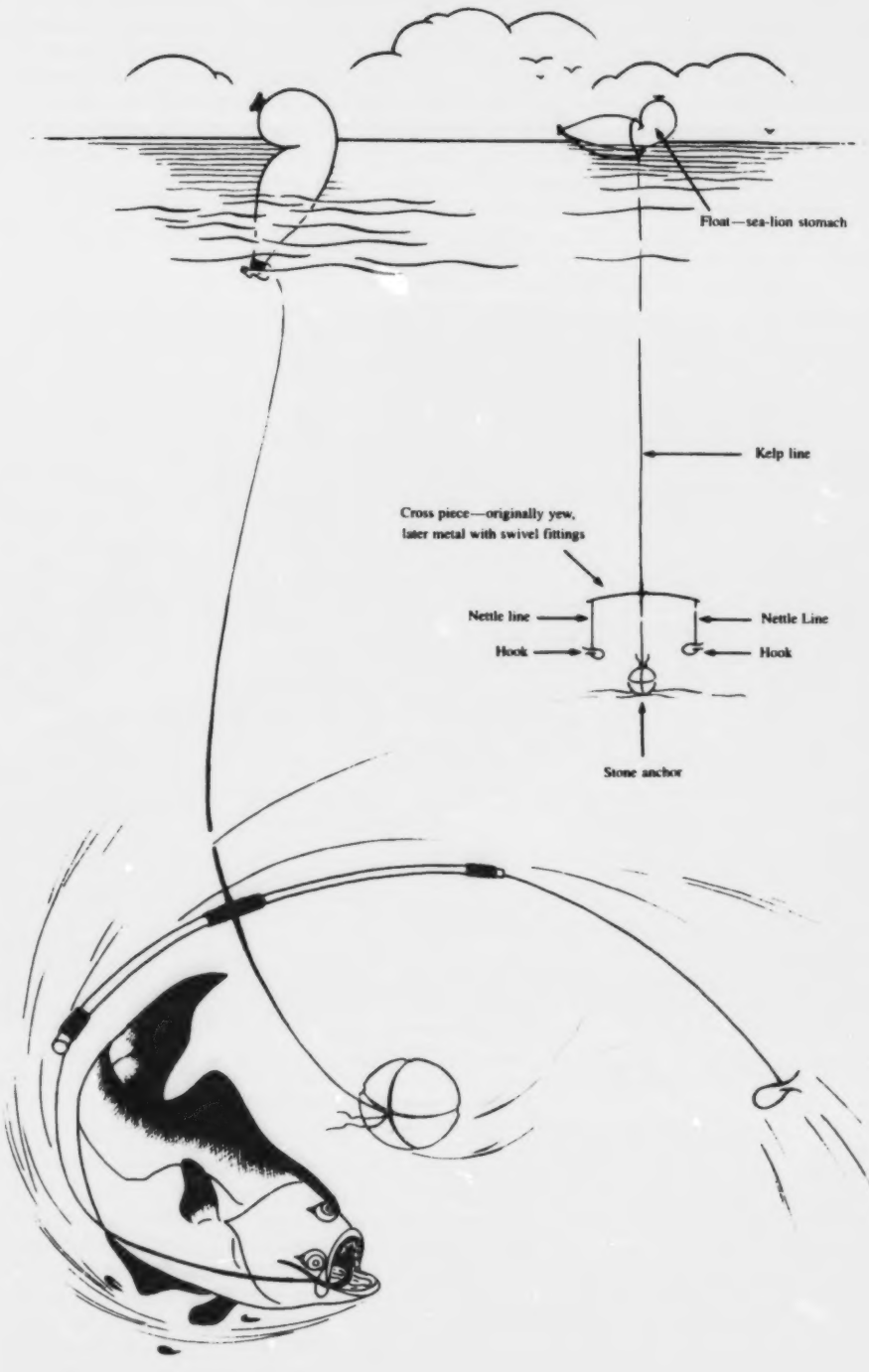

Fig. 29 Halibut fishing apparatus, as described by John Thomas.
(Drawing by Elizabeth J. Stephen)

shank. In recent times, the fine wrapping was a single strand unravelled from No. 28 cotton line about a metre long, and the second wrapping was from the whole three-strand line. A loop, traditionally of split spruce root, about 9 cm long, was attached at the point of balance on the upper arm of the shank. Its ends were tied around the shank and wrapped with animal sinew. The end half of the upper arm, from the tip to the loop, was wrapped with finely split spruce, hemlock or fir root (Arima, 1975-76). The halibut hook could be baited with a variety of types of flesh: octopus, dogfish, various types of salmon and cod, sea cucumber, flounder, bullhead and other kinds of fish, and even hair seal (Arima, 1975-76). When octopus was used, about 5–7 cm of the skin was left loose and allowed to flutter in the water and attract the fish (JT).

The hook was apparently used singly traditionally (Arima, 1975-76). More recently, within the memory of JT, the hooks were used in pairs, separated by a spreader. The spreader was taken from limber saplings of yew or hemlock. Yew was preferred because it was stronger, but hemlock was more readily available. According to CJ, the hooks were usually attached by a "safety line" to the main line, in case the spreader broke (Arima, 1975-76). Arima provides detailed descriptions of traditional and more modern methods of halibut fishing used by the Nitinaht. Figure 29 shows the technique known to JT. The hooks were suspended at each end of the spreader by nettle-fibre lines. These were about 1 m (3 ft.) in length, and the spreader was about 1.2 m (4 ft.) long. More recently, metal spreaders with swivel fittings were used. Attached to the centre of the spreader was a third nettle-fibre line, about 2 m (6 ft.) long, with a rock sinker tied at the tend. The apparatus was attached to a main fishing line of bull kelp stipe, which was tied to a float made from a seal's stomach. A line was fastened to the narrow end of the float by a slipknot, and when a fish was caught on the hooks, the slipknot would pull out, allowing the float to bob upright in the water to show the fisherman he had caught something.

According to Arima (1982), halibut hooks could also be used to catch other fish, including ling cod, black cod, red cod, red snapper, dogfish, bullhead and skate, and even octopus by the tentacle.

Line, Fishing—The main part of a fishing line was of bull kelp stipe, carefully cured with dogfish oil or some other type of oil for a period of a year or more. Only bull kelps from certain places were used for fishing line; the stipes had to be long and very thin, and were often harvested from the kelp beds by specially trained divers. Kelp lines were used both for trolling and for bottom fishing. Two or more lengths could be joined together by a "fisherman's knot" (see Figure 30). A leader of nettle-fibre, often spun together with cottonwood bast fibre, was usually attached to the kelp lines, then the hooks were attached to the leader. This leader was more invisible to the fish than the kelp line, and would break more easily if the hook were snagged, thus preventing loss or damage to the main kelp line. The nettle lines were usually dyed with hemlock bark to make them even less visible to fish. (see also under bull kelp—*Nereocystis luetkeana*, and stinging nettle—*Urtica dioica*.)

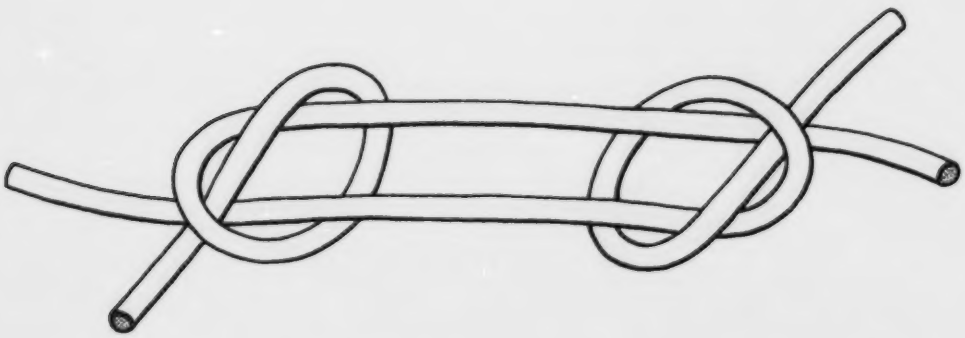

Fig. 30. Fisherman's knot, used to join lengths of bull kelp line together.
(Drawing by Elizabeth J. Stephen)

Lures, Fishing—Two types of lure, both usually having devil's-club as a component, were described by John Thomas. The first was for codfish and was used with a long pole. The name for devil's-club was apparently derived from the name for this type of "shuttlecock" lure, or *vice versa*. The lure was made from two pieces of devil's-club wood, bound together at one end, around a piece of cedar, and flaring outwards at the other. Lashing was of bitter cherry bark or spruce root (see Figure 31). The lure was pushed deep in the water with a pole of Douglas-fir, and was then released and allowed to twirl up to the surface. The cod would follow the lure and would be speared by the waiting fisherman when it approached the surface.

The second type of lure was somewhat fish-shaped and was fixed with a hook and drawn through the water on a line. It would spin around on its longitudinal axis and attract the fish (see Figure 32). (For a more detailed description of these lures, see under devil's-club—*Oplopanax horridus*.)

Fig. 31 Codfish lure, of the type used by Nootka and Nitinaht people. The "wings" are probably of devil's-club wood; the main body is said to be of cedar, and the lashings of spruce root. This specimen was collected at Dodge's Cove (near Bamfield) in 1911 by C. F. Newcombe. (Ethnology Division, BCPM)

Mats—Mats were made of the inner bark of red cedar, or sometimes yellow cedar, woven usually in a checkerboard pattern. Another type was made of tule stems sewn together. Bark mats were used for a wide variety of purposes, from sitting and laying food on, to covering a steaming pit in the days before canvas or burlap sacking was available. Tule mats were sewn with long needles of yew wood or oceanspray wood, and nettle fibre, or, recently, imported hemp string, as thread. They were soft and spongy, and hence were used for mattresses, four or five layers being placed together, and for room dividers and wall insulators. Since the stems were all running in one direction, the mats could be tightly rolled up for storage and transport. In the Salish and neighbouring Nootka areas, cat-tail leaves were also used in mat-making (Turner, 1979; Turner and Efrat, 1982), but our Nitinaht consultants did not recall cat-tail leaves being used by the Nitinaht for mats. They were, however, apparently used for skirts and a type of open-work basket.

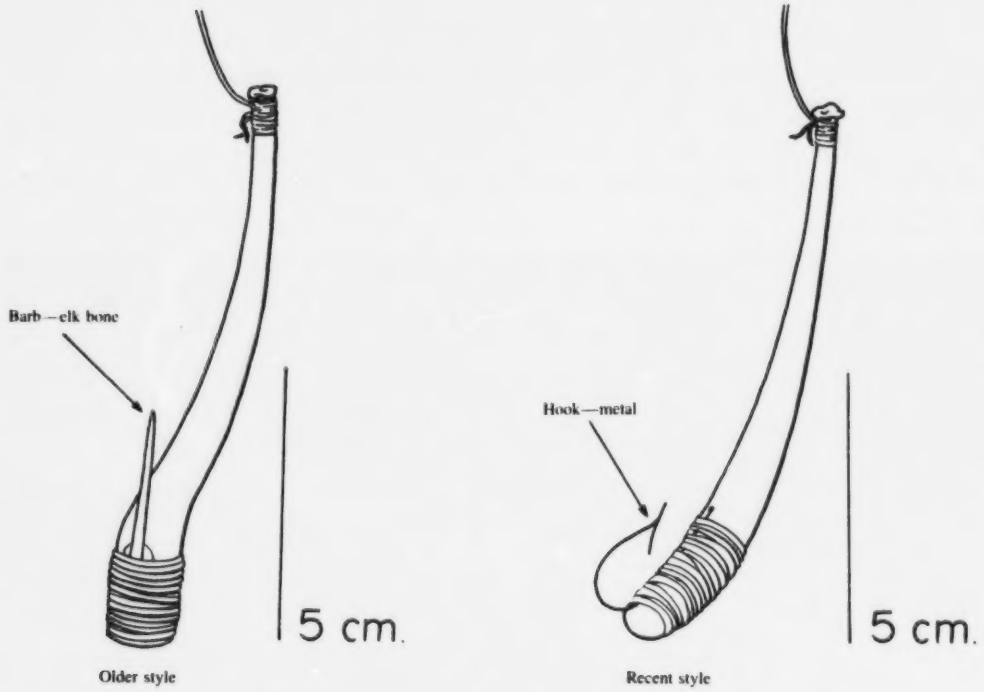

Fig. 32 Fish ("sea bass") lures (**ha·ʔaɬaƛ̓k**), of devil's-club wood, as described by John Thomas. (Drawing by Elizabeth J. Stephen)

Nets—Nets were used both for fishing and for trapping ducks. Stinging nettle fibre, usually spun together with cottonwood bast fibre, was the usual material for nets. The basic construction of the fishing and duck netting was the same. The nets were tied with sheet-bend knots, because they hold no matter which way they are pulled. Details on the use of duck nets are given under stinging nettle—*Urtica dioica*. Dipnets for herring and other fish were also used, and the netting was made of the same material.

Paddles—Steering paddles were always made of western yew, whereas paddles for general use were usually made of yellow cedar or bigleaf maple. (JT; CJ; Arima, 1982).

Rattles—Ceremonial rattles of a variety of shapes were used by the Nitinaht, and were generally carved from the wood of red alder, or sometimes bigleaf maple (see Figure 33).

Ropes—Ropes, for use in whaling, tying houseboards on to houses, and other heavy-duty applications, were made from the split young branches, or withes, of western red cedar. The withes were twisted while still attached to the tree, until they had broken into many longitudinal strands. The bark was then removed, the strands untwisted, and the withe cut off the tree. These were then twisted into rope by rolling on the bare thigh, either in pairs, for a thin rope, or several strands together, for a thicker rope. New strands were spliced in as required, and the resulting rope could thus be made as long as necessary. Whaling might require some 75 m (40 fathoms) or more of cedar-withe rope (see under *Harpoons, for Whaling*). Another type of heavy-duty rope, which was exceptionally strong and elastic, was used at the beginning of the whaling line, and was made of twisted sinew from a whale's back. Single strands of twisted, split cedar withe were often used for tying.

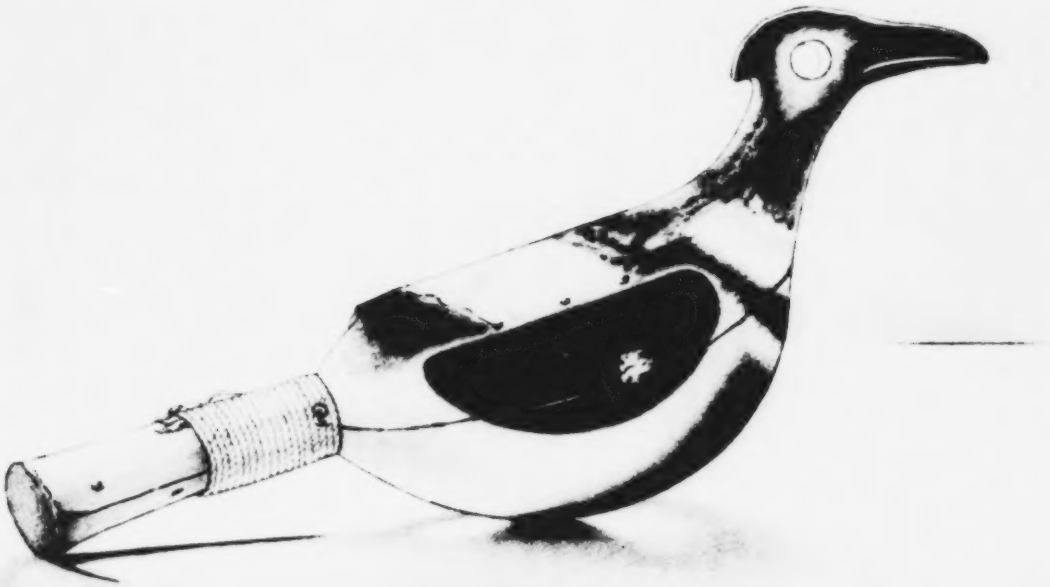

Fig. 33 Ceremonial kingfisher rattle. John Thomas believes this to be one formerly owned by his grandfather Tom Klishil, having been inherited by Klishil from his uncle. If so, he recalls, it was made of alder. The rattle is now in the Ethnology Division Collection, BCPM. (Drawing by Elizabeth J. Stephen)

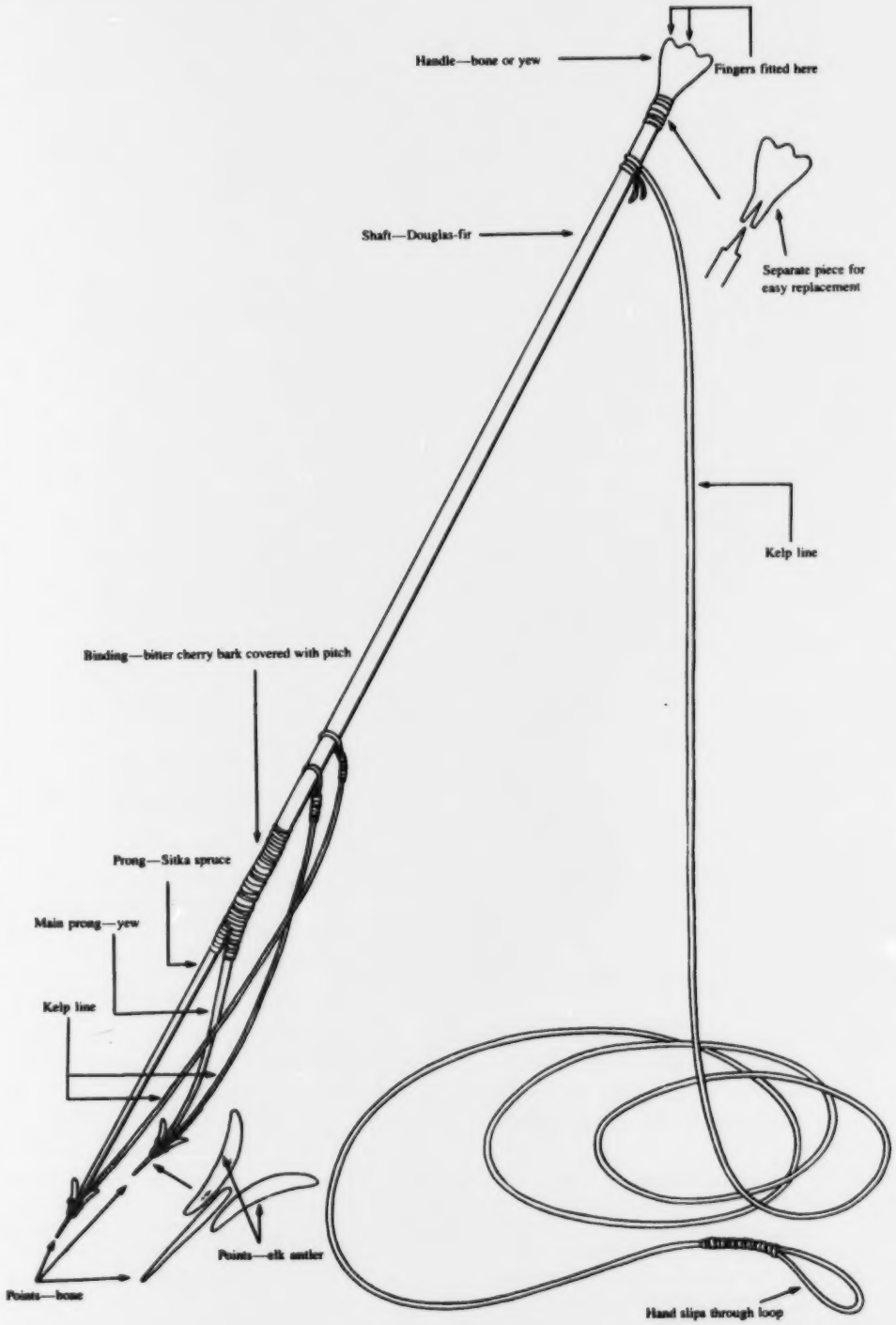

Fig. 34 Two-pronged salmon harpoon. A similar, larger harpoon was used for fur seals. (Drawing by Elizabeth J. Stephen)

Inner bark of red cedar was also spun into rope and used for a variety of tying and binding purposes. It was, as might be expected, not as strong or durable as cedar-withe rope. Binding and tying were also done with nettle-fibre twine, split Sitka spruce root, and bitter cherry bark, as noted earlier.

Spears—Several types of spears were used by the Nitinaht. One of the most important was the two-pronged harpoon for salmon. The shaft of this spear was of Douglas-fir, the longer prong was of Sitka spruce, which is very lightweight, and the shorter, lower prong was of western yew, which is strong and heavy. The balance of woods of different weight was important in guiding the spear when thrown. The prongs were bound to the shaft with bitter cherry bark and the joints were sealed with pitch. The points were compound, each of two pieces of elk bone, or, recently, of metal, and were detachable. They were attached to the main shaft by short kelp lines, and the entire spear was attached at the end to a kelp line, which was kept coiled while the spear was held (Figure 34). Once the spear was thrown, this line could be used to pull the spear back, with or without a fish on it. A similar harpoon, but longer and more flexible, was used for seals, which were caught just off the bar at Whyac, among other places. John Thomas explained that the shaft was more flexible so that it would "move better through the (tops of the) waves" when thrown. The points of the harpoons for fur seals were usually metal; fur seals were apparently hunted in large numbers only since the coming of the Europeans. The sea mammal harpoon is described in detail by Arima (1982).

Another type of spear, used for sea urchin, had a shaft about 3.5 m (10–12 ft.) long. Lashed on the end were four straight metal prongs. The lashing was of twine, or soft wire. The prongs were often made from old telephone wire and were about 6 mm (¼ in.) in diameter. The spear was thrust into the water where there were sea urchins, and these became entrapped and held by the metal prongs. The green sea urchins, considered best for eating, were not found as far north as Whyac and Clo-oose, according to John Thomas. They were caught around Port Renfrew and Jordan River and imported to the Clo-oose area. A similar, three-pronged spear for sea urchins is described by Ellis and Swan (1981) for Manhousat Nootka. Its shaft was of red cedar or Douglas-fir, and its prongs of yew. A dip net for sea urchins is also described.

Another kind of spear was used for octopus. Its shaft was made of oceanspray wood or yew, and it had a barb of yew tied at the end. The spear was thrust under the large rocks on the beach in the tidal zone, where octopus had their dens.

Wedges—Wedges were used for splitting cedar logs in making houseboards and canoes. They were traditionally made from western yew and, in fact, the Nitinaht name for yew, as in some other languages, is derived from the word for "wedge" (**ʔaʔčak**). The top of the wedge was usually bound with cedar-withe rope to prevent it from splitting under pressure (Figure 35).

Weir, Salmon—Salmon weirs were usually made of upright poles or slats of western red cedar, placed close together and twined at one point, or at intervals, with Sitka spruce root or some other type of lashing material. John Thomas' paternal grandfather, **ʔi·šal** or Tom Klishil, maintained such a weir for sockeye at the upper reaches of the Cheewhat River. The slats protruded about 2 m out of the water. The weir was comprised of two separate parts (see Figures 36 and 37). The first was a shallow "V" pointing upriver and open at the tip, allowing the fish to swim through, but making it nearly impossible for them to swim downriver again. A distance further upriver was the second part of the weir. It consisted of a "fence" extending across the river, with, at the centre, a long, narrow "V", pointing upriver. The salmon would congregate in this narrow part and Tom Klishil, standing in a small dugout right beside it, would use a gaff to hook out as many sockeye as he needed. This was not very many because the sockeye were said not to dry or store well. When he had enough, he removed this upper "V" portion altogether, and the fish could swim up to their spawning grounds. This type of trap was called **buša?**. Arima (1975-76) describes a variation of the same type of weir, and notes that it had upright support posts of yew and horizontals of vine maple, tied with cedar withes.

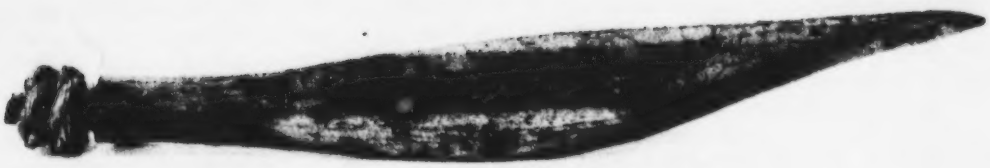

Fig. 35 Yew wedge of the type used by Nootka and Nitinaht. The head is bound with a cedar-withe rope to prevent it from splitting. Collected by C. F. Newcombe in 1912. (Ethnology Division, BCPM)

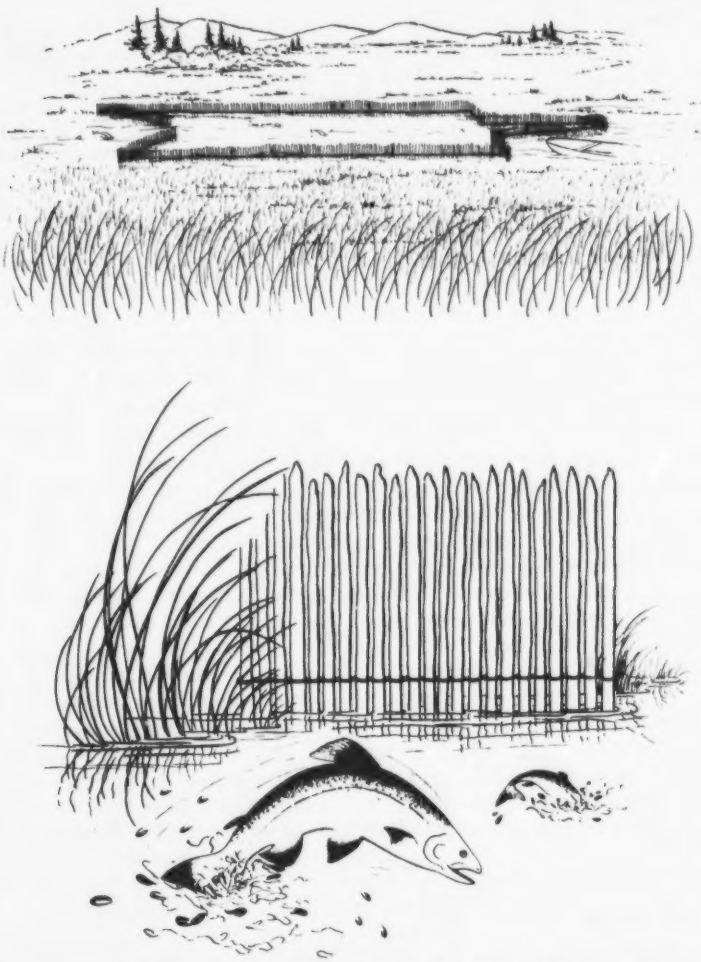

Fig. 36 Thomas Klishil's sockeye salmon weir (**buša?**), made of splints of red cedar, in the upper Cheewhat River, as described by John Thomas, Klishil's grandson. (Drawing by Elizabeth J. Stephen)

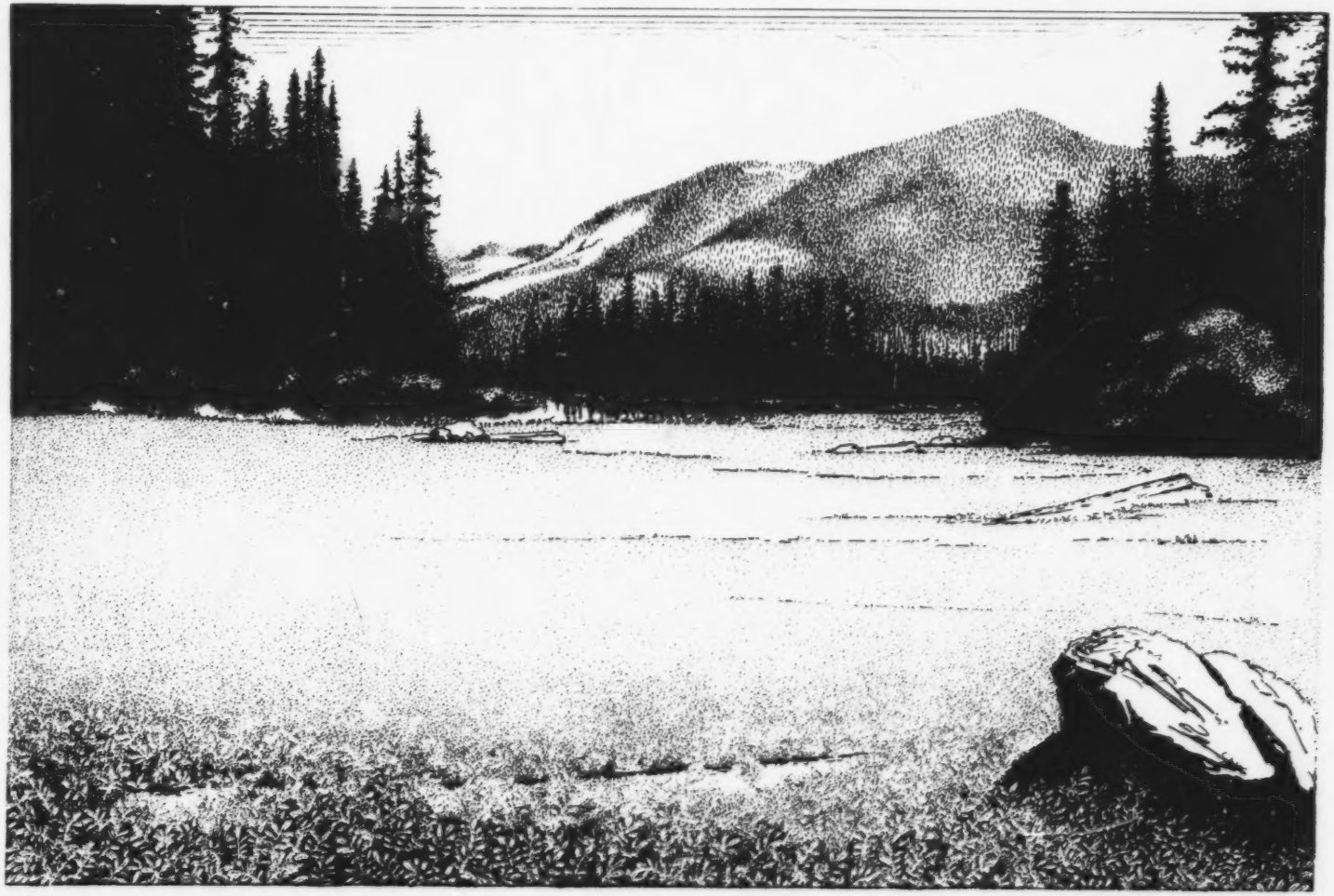

Fig. 37 The upper Cheewhat River, near the site of Thomas Klishil's salmon weir (see Fig. 35). Note extensive patch of Pacific cinquefoil in foreground. (Drawing by Elizabeth J. Stephen)

Plant Medicines

Herbal healing in the Nitinaht culture, as in other Northwest cultures, was distinct, though not entirely separate from, the magical or supernatural healing practices by shamans or Indian doctors. Our findings show that some 30 to 40 species of plants were used by the Nitinaht as herbal medicines (Table 4). Many were applied for more than one type of ailment. As least eight species were used for general tonics (Table 4, A.). Six were employed as purgatives, laxatives, or emetics, some during training for adulthood (Table 4, B.). Six were administered for colds, coughs, tuberculosis and other respiratory ailments (Table 4, C.), and three for internal injuries (Table 4, D.). Two were taken for urinary ailments (Table 4, E.), and five used as poultices or washes for wounds, infections, or burns (Table 4, F.). At least three were used for arthritis and rheumatism (Table 4, G.), one for eye ailments, and one for stomach ulcers (Table 4, H. and I.). Four or five species were involved in childbirth or in determining the sex of offspring before birth, and at least two were used against

TABLE 4

Nitinaht Plant Medicines Encountered in This Study (in alphabetical order of scientific name, within categories delimited)

A. *Tonics, General*

Achillea millefolium (Yarrow)—leaves chewed and swallowed
Ledum groenlandicum (Labrador-tea)—infusion of leaves drunk
Lonicera involucrata (Black Twinberry)—buds eaten or bark rubbed on body
Nuphar polysepalum (Yellow Pond-lily)—infusion of rhizomes drunk
Prunus emarginata (Bitter Cherry)—infusion of bark drunk
Rhamnus purshiana (Cascara)—infusion of bark drunk
Rosa nutkana (Nootka Rose)—infusion of leaves drunk
Urtica dioica (Stinging Nettle)—young shoots eaten

B. *Purgatives, Laxatives, and Emetics*

Aruncus sylvester (Goat's-beard)—infusion of roots, purgative
Lycopodium selago (Fir Club-moss)—leafy shoots eaten, purgative
[Mahonia spp. (Oregon-grapes)—possibly for laxative]
Menziesia ferruginea (False Azalea)—bark causes vomiting, dizziness
Rhamnus purshiana (Cascara)—infusion of bark as laxative
Ribes bracteosum (Stink Currant)—berries, laxative
Sambucus racemosa (Red Elderberry)—infusion of bark, roots, purgative

C. *Colds, Coughs, Tuberculosis and Other Respiratory Ailments*

Achillea millefolium (Yarrow)—leaves chewed, or decoction drunk
Alnus rubra (Red Alder)—infusion of bark drunk; usually mixed with hemlock and *Abies*. (see D.)
Lomatium nudicaule (Indian Consumption Plant)—seeds used as chest poultice (imported from southern and eastern Vancouver Island)
Polypodium glycyrrhiza (Licorice Fern)—rhizomes chewed and juice swallowed
Pyrus fusca (Pacific Crabapple)—infusion of bark drunk
[illegible] (Unidentified—possibly *Peltigera aphthosa*)—chewed and swallowed for tuberculosis

D. *Internal Injuries*

Abies sp. (Grand Fir or Amabilis Fir)
Alnus rubra (Red Alder)
Tsuga heterophylla (Western Hemlock)
} barks combined and infusion drunk

E. Urinary Ailments

Symphoricarpos albus (Waxberry)—infusion of bark drunk for inability to urinate
Unidentified plant (possibly *Peltigera canina*—see Appendix 1)—chewed for inability to urinate

F. *Poultices or Washes for Wounds, Infections, Burns*

Lysichiton americanum (Skunk-cabbage)—leaves for severe burns
Maianthemum dilatatum (Wild Lily-of-the-valley)—leaves for sores, boils, and mild burns
Plantago major (Broad-leaved Plantain)—leaves for sores, boils
Populus balsamifera ssp. *trichocarpa* (Black Cottonwood)—resin for wounds and cuts
Rhamnus purshiana (Cascara)—infusion of bark as wash for sores, wounds

TABLE 4—*Continued*

G. *Arthritis and Rheumatism*

Oplopanax horridus (Devil's-club)—infusion of bark drunk
Urtica dioica (Stinging Nettle)—stems and leaves rubbed on skin as counter-irritant
bayałsi? (Unidentified—see Appendix 1)—chewed for pain

H. *Eye Medicine*

Conocephalum conicum (Thallose Liverwort)—preparation unknown

I. *Stomach Medicine*

Plantago major (Broad-leaved Plantain)—chewed and swallowed for ulcers

J. *Childbirth Medicines*

[*Cornus canadensis* (Bunchberry)—believed to cause only female babies if berries eaten by young women]
Gaultheria shallon (Salal)—leaves chewed by couples wishing male offspring
Halosaccion glandiforme (Sac Seaweed)—fluid from sacs drunk by a woman wishing male offspring
Oenanthe sarmentosa (Water-parsley)—root-crown chewed by a woman to speed up and facilitate labour
Polytrichum commune (Hair Moss)—chewed by woman in labour

K. *Nervous Disorders*

Lonicera involucrata (Black Twinberry)—buds chewed or bark rubbed on person with "nervous breakdown"
Postelsia palmaeformis (Sea Palm)—ashes from plant rubbed on face of person with convulsions, or who had "gone crazy"

L. *Protective Agents—to combat evil influences*

Abies sp. (Grand Fir or Amabilis Fir)—incense from boughs, against sickness
Cirsium spp. (Thistles)—leaves and root placed around household, or kept on person
Conocephalum conicum (Thallose Liverwort)—eaten to protect against death-causing dreams
Ganoderma applanatum and other Tree Fungi (see M.)
Lomatium nudicaule (Indian Consumption Plant)—incense from seeds, against sickness (imported from southern and eastern V.I.)
Menziesia ferruginea (False Azalea)—bark eaten to counteract sickness caused by evil Indian doctor
Nuphar polysepalum (Yellow Pond-lily)—infusion of rhizome drunk against illness
Oplopanax horridus (Devil's-club)—charcoal used as protective face paint by dancers
Symphoricarpos albus (Waxberry)—infusion of bark used as wash to "protect" one from falsehood
Tellima grandiflora (Tall Fringecup)—eaten to protect against death-causing dreams
baxałsi? (Unidentified—see Appendix 1.)—rubbed on skin to counteract sickness caused by evil Indian doctor

M. *"Good Luck"* Charms

Adiantum pedatum (Maidenhair Fern)—rubbed on dancers' feet to make them light-footed
Fucus gardneri (Bladderwrack)—rubbed on whalers' skin and canoes to bring luck in whaling; also used by pregnant mothers of unborn whale hunters
Ganoderma applanatum and other Tree Fungi—used as a charm to counteract evil thoughts against one
Lessoniopsis littoralis and *Postelsia palmaeformis* (Sea Palm-like Algae)—ashes from stipes rubbed on the spines of young boys to strengthen their bodies
Symphoricarpos albus (Waxberry)—berries rubbed on faces of lehal players to keep others from guessing the whereabouts of the bone
Urtica dioica (Stinging Nettle)—rubbed over the body as a love charm, and by a whaler's wife to ensure a successful hunt

N. *Plants Causing Some Form of Harm or Bad Luck*

Achillea millefolium (Yarrow)—causes white spots on the skin if handled
Arbutus menziesii (Pacific Madrone)—if touched, would cause one's luck to "peel off", like the bark
Erythronium revolutum or *Trillium ovatum*—said to cause fog if picked
Heracleum lanatum (Cow-parsnip)—if touched, might prevent one from catching fish; if too much eaten might cause sore, blistered lips; if bud-stalks eaten by pregnant woman, her child might become "epileptic"
Lycopodium clavatum (Running Club-moss)—if handled, could cause one to lose one's way in the woods
Ribes bracteosum (Stink Currant)—if touched, might prevent one from catching fish
Thuja plicata (Western Red Cedar)—can contaminate drinking water, causing diarrhoea
Trillium ovatum (Trillium)—see *Erythronium*, above

nervous disorders (Table 4, J. and K.). Additionally, a number of plants were used as scents and cleansing agents, and although these are listed under the table on Nitinaht Plant Materials (Table 3, F.), many could be considered as having medicinal attributes.

As well as these medicinal plants, over 10 species were considered to have protective properties against evil influences, whether these be from disease or from other people who wished ill towards one. Six species were used in some capacity to bring good luck or success (Table 4, L. and M.). Some seven species were believed to cause harm or bad luck in some way, and are included here (Table 4, N.), even though they could in no way be considered medicines. In some instances, the harm was of a physical nature, as in yarrow causing white spots on the skin if touched. For others, the harm was of a less concrete form as in running club-moss causing one to lose one's way in the woods.

Traditionally, many Nitinaht people held knowledge of herbal healing, but some were acknowledged experts in the field. Some learned the information by chance, whereas others inherited it from their mother, father, or a grandparent. Knowledge of certain medicines was a tradition, passed down in each family to someone in the younger generation, either male or female. A herbal specialist within the family, or from another family in the village would be called in, in cases of illness, and would receive payment for their healing services. The amount of payment varied with the seriousness of the affliction. Formerly, payment was usually in the form of food, such as dried salmon, for minor treatments, or, if the treatment was very difficult and involved a serious illness, the herbal specialist might receive a canoe or a slave. When John Thomas was a youth, payment was with money—usually $10 or $20 depending on the extent of the treatment.

Many herbal medicines were, and still are, considered to be the private property of a family. Secrecy was felt to be very important and in many instances the identity of the herb used was known only to the healer. Often, even the patient did not know what plant was being used because it was usually pulverized or disguised in some way. However, if the patient was a member of the family, he or she might be told about the medicine and allowed to see how it was prepared. Sometimes, a young relative might be asked to assist in collecting and preparing a medicine. When Ida Jones was young, she sometimes went with her grandparents or other elders in the village to help administer medicines. She was also shown some of the medicines she herself was given, and some, such as water-parsley (*Oenanthe sarmentosa*), which her mother-in-law gave her to ease and accelerate labour in childbirth, she has used and kept secret all her life. Now, she has generously shared them with us because she felt they might help modern medical researchers in their quest for new and better medicines. Mary Thompson and Lena Johnson also shared some of their family medicines with us so that these would not be lost to future generations.

The same traditions of inheritance and secrecy of herbal knowledge were practiced by the Makah and Nootka (Densmore, 1939; Turner and Efrat, 1982). One Clayoquot woman commented to Densmore (1939) that remedies would lose their powers if used too freely, so the doctors seldom gave herb remedies unless very highly paid.

Herbal remedies were applied in a variety of ways, depending on the illness and on the type of plant and part of the plant being used. Many were taken as infusions, where the plant parts were steeped for a given length of time in water which had just been boiling, as when one is making tea. John Thomas stressed that decoctions, where the plant was actually boiled in water, were seldom used. He also noted that in most cases, the longer an infusion was stored, the stronger it became, and the less the dosage would have to be to obtain the same effect. Infusions were taken internally as tonics and laxatives and for a variety of internal ailments, or, in some cases, were used as washes for the skin.

Sometimes, instead of being taken as an infusion, the entire plant or plant part was chewed and swallowed. For skin ailments—cuts, burns, and infections, and sometimes for other treatments as well—a plant was used whole or slightly mashed and applied to the skin as a poultice.

Many medicines were administered over several days, or even weeks, being applied at intervals. Some infusions were simply drunk to replace water or another beverage; in fact, John Thomas stressed that one should not drink tea or other liquids when one is undergoing treatment.

The use of traditional herbal medicines by the Nitinaht has greatly decreased within the past few decades. However, some people, especially the elders, still use them and often prefer them to modern medicines. Undoubtedly, many of the traditional medicines were effective. Cascara, used by the Nitinaht and many other Native peoples as a laxative, is widely known as a gentle and

effective cathartic, and has been adopted into modern medicine, although recently its use has declined. Possibly, with further medical research, some of the other herbal medicines described will take their place in the modern pharmacopeia, to the benefit of all.

Nitinaht Nomenclature and Classification of Plants

The Nitinaht system for naming and grouping plants is generally similar to that of the Hesquiat Nootka (Turner and Efrat, 1982) and other Native language groups in northwestern North America (cf. Turner, 1974). All of these taxonomic systems appear to follow a pattern consistent with most, if not all, folk taxonomic systems throughout the world, as suggested and documented by researchers in folk classification (cf. Berlin *et al.*, 1966, 1968, 1973; Berlin, 1971). However, with the northwestern North American, and probably most other temperate groups, the number of species named and included within the classification systems is markedly fewer than in tropical and subtropical areas. Furthermore, as might be expected in nonagricultural areas, the specific-level taxa are scarcely represented and varietal level taxa are not represented at all.

In Nitinaht, as in other Northwest cultures, plants do form a discernible cognitive domain. There is no all-inclusive term, called a "unique beginner" (Berlin, 1971), that is applied to any and all members of the domain—i.e., corresponding with "plant" in English. As John Thomas remarked, "They pretty well detailed the separate [kinds], but . . . [there is] not a general term for plant life." Nevertheless, in many cases, the botanical status is linguistically marked by a suffix or other linguistic element in the name of a plant.

The most common "plant" suffix is **-apt** (cf. **čiɬsq-apt**, lit. 'owl's plant', for waxberry; **ƛat-apt**, lit. 'wedge plant', for western yew; **ɬud·daʔx-apt**, lit. 'tule-mat plant', for tule). Other related suffixes include: **-pat** (cf. **čib-pat**, for tall basket sedge; **ti·pat**, for Labrador-tea); **-pt** (cf. **ɬučuč-pt**, for short kelps); and **-ipt** (cf. **ʔiš-ipt**, for pines; **ʔic-ipt**, for lady fern and spiny wood fern). Additionally, the element **-q-** is found in a number of plant names and seems to denote botanical attributions (cf. **ci·ciyap-q-aʔs**, lit. 'having hats on the ground', for mushrooms). Many plant names do not incorporate any of these elements (cf. **waʕi·ẇ** for water-parsley; **ƀasta·č**, for bunchberry; **bo·isiʔd**, for Canada blueberry), but nevertheless, their botanical status is obvious by the context in which they are used.

There is one term, **ƛaqpat**, that translates generally as 'plant', as well as 'leaf', but on further investigation, one finds that this term cannot be applied to trees or tall shrubs nor, apparently, to ferns, mosses, lichens, fungi, or marine algae, according to John Thomas. Hence, it must be construed as a sub-category, at the level of "life-form" taxon as described by Berlin (1971). Its most appropriate gloss would be 'herbaceous plant', although some low shrubs and vines, such as kinnikinnick, are also delimited by it. John Thomas gave as examples of plants in this category: cat-tail, bunchberry, and skunk-cabbage. He also noted that it was the usual term applied to potted houseplants.

As far as can be determined, the named "life-form" categories in Nitinaht include:

"herbaceous plants and low shrubs"—**ƛaqpat**
"seaweeds" (i.e., marine algae and Zosteraceae)—**ƛa·ypiš**
"mushrooms"—**ci·ciyapqaʔs** (lit. 'having hats on the ground')
"tree fungi"—**dayaƛuʔ**
"mosses, lichens, and other moss-like plants"—**ƀuʔup**
"creepers and vine-like plants"—**ɣi·ʔukʷ** (lit. 'crawling')
"grasses and grass-like plants"—**ʕaqpat**
"fresh-water plants"—**čač** (lit. 'of the water/in the water')
"trees and tall shrubs"—**šučas**

Within the last category, no linguistic distinction was made between needled trees (i.e., coniferous trees) and broad-leaved trees. Both needles and leaves were called by the same term, **ƛaqpat**. These categories are generally mutually exclusive. Some, such as "trees . . ." (**šučas**) and "herbaceous plants . . ." (**ƛaqpat**), include many named members, or sub-taxa, whereas others, such as "mosses . . ." (**ƀuʔup**), and "mushrooms" (**ci·ciyapqaʔs**), have few or no named members within them. Although many different kinds might be recognized within the latter categories, these are not considered distinctive enough or economically important enough to be marked with a less general name. Such taxa, with few or no named sub-taxa, can be termed "empty categories" (Turner, 1974).

Not all plants fit into the life-form categories listed. Ferns, for example, although they have no general name in Nitinaht, are not classed as **ƛ̓aqpat**, and do not fall within the other named taxa. Rather, they seem to form a "covert", or unnamed, intermediate category of their own (cf. Berlin *et al.*, 1968). The basket "grasses", *Carex obnupta* and *Scirpus americanus*, and their relatives, apparently do not fall within the **ʕaqpat** category of "grasses . . .", and are not really considered as **ƛ̓aqpat** either. Hence, they also form an intermediate category. The liverwort, *Conocephalum conicum* (**ƛ̓a-ɣaʔs**), is another example of a plant that does not conform to any of the life-form categories, and might be placed in an independent taxon of its own.

Various other "intermediate" categories can be delimited, but unlike those previously mentioned, most could be considered sub-categories of the named "life-form" taxa. Schematically, their relationships to the "life-form" categories is shown in Figure 38. As can be seen, these taxa are more specific than the "life-form" taxa, but more general than "generic-level taxa", which correspond with botanical species in most cases. Some of the intermediate taxa are named (cf.

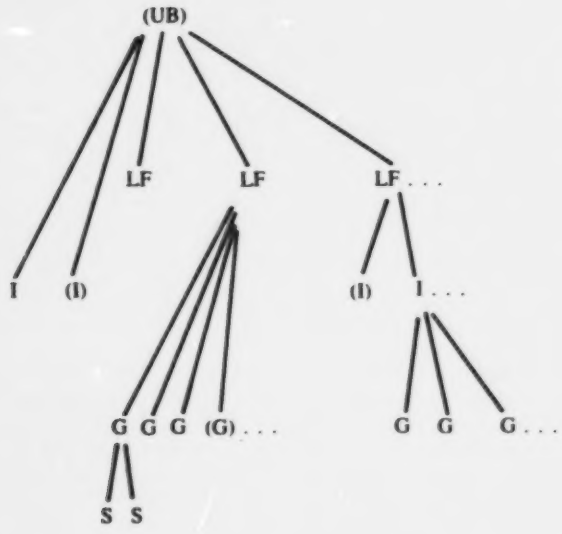

Fig. 38 Diagramatic representation of the hierarchical relationship between "lifeform", "intermediate", and other categories in Nitinaht plant classification. [UB = "unique beginner" (i.e., "plant"); LF = "lifeform"; I = "intermediate"; G = "generic"; and S = "specific". Parentheses indicate lack of name in Nitinaht.]

šačkapt "any prickly or thorny plant", such as thistle, wild rose, gooseberry, devil's-club, and, recently, gorse; or **ʕubqabs** "any green water growth", such as *Enteromorpha*). Others are simply implied by common usage. The categories of "food", denoted by Thomas and Hess (1978), could be considered intermediate taxa. The two classes of vegetable foods suggested* are: **ʕu-čaqtp** "fruits", or more specifically, **qaway** "berries"—applied at the generic level to salmonberries; and **ƛ̓ičsap** "edible roots"—applied at the generic level to Pacific cinquefoil roots. In the last two cases, the intermediate category name was obviously derived, through a process of generalization, from the generic-level name of a particularly important species, sometimes called the "type generic". A similar situation exists for the "prickly plants" category, where the name, **šačkapt**, is applied at the generic level to thistles. However, in this case, whether the name was originally applied at the generic level and then came to be applied more broadly to all prickly plants, or whether the reverse occurred, is still subject to speculation.

* Additionally, three classes of animal foods were distinguished: **haʔeb** "fish, especially salmon"; **ƛ̓i-čaqtp** "seafood obtained from the rocks at low tide"; and **hiʔc** "meat" (Thomas and Hess, 1978).

In one of the life-form taxa, that of "seaweed", the name **čə·ypiš** is also applied at the generic level, to the edible red laver (*Porphyra perforata*). In this case, too, it is less clear whether the name was originally a general term that came to be applied at a more specific level, or *vice versa*. The former seems more likely in this instance because *Porphyra* apparently was not eaten and had no economic importance to the Nitinaht until relatively recently, when it began to be harvested for sale to Oriental people in Victoria.

A parallel can be seen in Hesquiat Nootka, where the life-form term **ƛ̓aqapt**, cognate with Nitinaht **ƛ̓aqpat** but apparently even more general in its application, is applied simultaneously at a "generic" level to kinnikinnick (Turner and Efrat, 1982). (John Thomas and Ida Jones were asked whether **ƛ̓aqpat** could be applied specifically to kinnikinnick in Nitinaht, but, after some consideration, concluded that it could not.) In Hesquiat **ƛ̓aqapt**, as with Nitinaht **čə·ypiš**, it is unclear whether the term was applied originally at the general or at the "generic" level, but if, as the Hesquiats maintain, the smoking of kinnikinnick leaves was a relatively recent practice in their group, a general-to-more-specific transition would be suggested.

In all, about one hundred named "generic" level taxa have been recorded for indigenous plants in this study. In addition, over thirty equivalent taxa have been added to the language to accommodate recently introduced plants and plant products. Most of the "generic" level taxa show a one-to-one correspondence with botanical species, but some, such as **ɬuʔulq** and **ɬuʔulqapt**, for strawberry and strawberry plant, and **ʔišipt**, for pines, are "underdifferentiated" compared to botanical species, since they apply to more than one species. In some cases, as with **ɬuc̓ɬuc̓pt**, for *Lessoniopsis*, *Postelsia*, and probably some other marine algae, and **ʔicipt**, for lady fern and spiny wood fern, the species included are in different botanical genera.

In a very few cases, as with **bač̓ɬe·y̓tapt** and **c̓ukʷƛ̓apt**, applying to different "varieties" of yellow cedar, and **naxu·** and **ʕeʕciy̓**, for different "varieties" of wild clover (both *T. wormskioldii*), the "generic" level names are "over-differentiated" compared to botanical species. Sometimes, as with giant horsetail (**baʔax**, for the fertile shoots, and **ɬu·xʷsi·p**, for the vegetative shoots), and tall basket sedge (*Carex obnupta*) (**c̓ibpat** for the non-flowering vegetative plants, and **čapxʷapt**, or "male" plant, for the flowering or fruiting plants), different "generic" level names are applied to different growth stages or forms of the same species.

For some plants, there are synonymous "generic" level names (e.g., Indian consumption plant, called **q̓əχmin̓**, or **ʕaʕayxʷqʷsiʔ**). However, in such cases, as in the example given, one usually finds that one of the synonymous terms (**q̓əχmin̓** in the example) is borrowed from another language. In one instance, namely for tiger lily, there is good evidence to suggest that one of the two synonymous names originally applied to a different species, mission-bells, or rice-root.

There is apparently only one example of a "generic" level plant taxon in Nitinaht that is further subdivided to a "specific" level, as defined by Berlin *et al.* (1973). That is **qaway**, salmonberry, which is differentiated nomenclaturally into its different colour forms: golden, ruby, and dark purple. As mentioned earlier, this scarcity of "specific" level and total lack of "variety" folk taxa is consistent with the situation existing in other Northwestern languages (Turner, 1974). Possibly the two varieties of yellow cedar could also be considered "specific" level taxa, rather than over-differentiated "generic" level taxa.

On a slightly different level, external to the actual taxonomic structure just described, is an elaboration of terminology applying to many "generic" level taxa. In some instances, as with the fruiting species, separate names are used for some particular, usually economically important structure of the plant (e.g., fruit) and to the plant itself. More often than not, the terms are linguistically related, the name for the plant being derived from the name of the economically important part, with the addition of the **-apt** "plant" suffix. Hence, Alaska blueberries are **bi·šapχ**, and the bush itself, **bi·šapχapt**; thimbleberries are **ʕicsiy̓c**,and the thimbleberry bush, **ʕicsiy̓capt**; and bitter cherry bark, an important binding material, is **di·ʔdikʷa·ʔdib**, and the tree, **di·ʔdikʷa··ʔdibapt**. It should be noted, however, that almost as often, the name of a plant is not derived from the name for a part of that plant but from some other feature, alluding to economic usage (cf. **ƛ̓atapt**, lit. 'plant for making wedges', for western yew), to traditional belief (cf. **čə-čə·waʕs**, lit. 'sad ones on the ground', for *Trillium* or *Erythronium*), or some innate property of the plant (cf. **ƛ̓astpapt**, pertaining to the plant's causing white spots on one's skin, for yarrow; and **k̓ʷitipt**, lit. 'sticks, grabs', for bedstraw). In a number of cases (e.g., **qaqapt**, for red alder), the plant names cannot be fully analyzed by Nitinaht speakers or linguists, and, one might assume, are either so old that their original meaning has been obscured, or were borrowed from another language and hence their

meaning is unknown in Nitinaht. It is also possible that at least some of the derivations that are given for the plant names may be folk etymologies, where the original meaning of the word has been obscured and replaced by a secondary one which, while it may seem plausible, is not valid. Most derivations, however, can be assumed to be correct.

In a significant number of cases, particularly for plants with multiple uses, there are separate, linguistically unrelated terms pertaining to different parts of the plant. Western red cedar is a prime example. The wood is **χubis**, and the name for the tree itself, **χubpat**, is derived from it. As well, there are separate and distinct names for the inner bark (**pičip**, also applied to the inner bark of yellow cedar), and for the withes (**supsiy̓a·t**). The wood, inner bark, and withes were all highly important in Nitinaht technology. Similarly, there are separate, unrelated terms for salal berries (**keyicapχ**), an important food, and for salal greenery (**ɬe·pat**), used in steam cooking. For salmonberry, as well as the "specific" level names for the colour forms of the berries, the "generic" level name, **qaway**, for the berries, and the associated name for the bush, **qawi·pt**, there is a term, **šišičqaʔdɬ**, for the edible sprouts, and yet another **ti·kʷid**, for the cooked sprouts.

The preceding is a simplified account of Nitinaht plant classification and nomenclature. In reality, the systems are highly complex and are constantly changing due to internal and external influences. Obviously, many changes have taken place in both the structure and content of the Nitinaht plant taxonomic system within the last two centuries, with the coming of the White man. New categories of plants, including both indigenous and introduced members (e.g., wild and cultivated onions; cow-parsnip, celery and rhubarb; wild and cultivated strawberries), and new names have been derived (e.g., **ti·pat**, lit. 'tea plant', for Labrador-tea). It is not within the scope of this study to document these changes entirely, but it is hoped that, with further research, far more can be learned about this interesting facet of Nitinaht ethnobotany.

INVENTORY OF PLANT SPECIES NAMED AND/OR USED BY THE NITINAHT

In this section, plant species are arranged by botanical species within the categories of Algae, Lichens, Fungi, Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms, including Monocotyledons and Dicotyledons. The last five groups are subdivided into families, which are listed alphabetically. Within these major categories, the plants are listed in alphabetical order of scientific name. Unidentified species are given in Appendix 1.

ALGAE (Seaweeds and Fresh-water Forms)

Marine algae are called by the general term **c̓a·ypiš**, which is also the specific name for *Porphyra perforata*, the red laver (JT, IJ, CJ). It is not known whether this term was originally the generic term, having been expanded cognitively to become a life-form term, or whether it was a life-form term that came to apply more specifically to one type of alga. As will be discussed later, *Porphyra* was apparently not eaten by the Nitinaht, nor by the Nootkan groups (cf. Fenn *et al.*, 1979; Turner and Efrat, 1982), but this still does not give a clear indication of the origin of the term. The Hesquiat Nootka name applied to *Porphyra*, **ʕumumc**, is also somewhat general, being applied to *Ulva* and some other algae, but this term is not cognate with the Nitinaht (see Turner and Efrat, 1982).

Only some of the marine algae, listed in the following section, were given generic-level names and had specific uses. Many others, particularly the smaller, finely dissected species (e.g., *Ptilota* spp., *Ceramium* spp., and *Desmarestia* spp.), were not recognized, or, if they were, had no Nitinaht name (JT, IJ).

Egregia menziesii (Turner) Areschoug (Boa Kelp)

This brown alga is called "Japanese weed" (JT), and is considered a newcomer to the West Coast, apparently introduced by the Japanese. No Nitinaht name for it was recalled (JT, IJ, CJ). The Hesquiat Nootka did not remember a name for this alga either (Turner and Efrat, 1982).

Enteromorpha intestinalis (L.) Link (Tubular Seaweed)

ʕubqabs (JT)

The above name is a general one for any green "slime" or algal growth in the water. This alga is very common at the mouth of the Cheewhat River. It was apparently not used for anything (JT). The

Hesquiat Nootka name for this alga, **ʔuʔinkitʔisʔi ʕumumc**, (lit. 'slim *Porphyra/Ulva*') Turner and Efrat, 1982), is not linguistically related to the Nitinaht. No Makah names were given by Gunther (1973) or Densmore (1939).

Fucus gardneri Silva (Bladderwrack, or Rockweed)

pu·pu·xʷiyʕa· (lit. 'a lot of blown up things on the rocks'; cf. **pu·xʷiyu·**'something blown up') (JT, IJ)

The receptacles, or "bubbles" pop when they are broken. Whalers rubbed themselves and their canoes with this plant to bring them luck in hunting. They rubbed very hard, to make the receptacles break open on their skin. A pregnant woman whose baby, if it were a boy, would inherit a position as a whale hunter also rubbed her body with this plant before her baby was born "because whale hunters were prayed for when they were still unborn" (JT). Neither the Hesquiat Nootka name, **huḥ-čapt** (Turner and Efrat, 1982), nor the Makah name, "**kaka'lak!oka dub,**" (Gunther, 1973) is cognate with the Nitinaht.

Halosaccion glandiforme (Gmelin) Ruprecht (Bladder Seaweed, or Sac Seaweed)

LJ called this by the same name as the previous species, **pu·pu·xʷiyʕa·**, presumably because it also is "blown up". JT did not recall any name for it, but said that when a woman first got married, if she wanted her first baby to be a boy, she would put one of the sacs of this alga in her mouth and squeeze it, to make the liquid squirt out into her mouth. The Hesquiat Nootka name for this species is **ʔiʔinmaƛuk** (lit. 'like a nipple') (Turner and Efrat, 1982). It was used as a plaything by Nootka children (Fenn *et al.*, 1979), but no specific medicinal use was recalled.

Hedophyllum sessile (C. Agardh.) Setchell, *Laminaria groenlandica* Rosenvinge, and other similar species ("Leafy Kelps")

ƛ̓oʕqʷapt

There is some confusion about the identity of **ƛ̓oʕqʷapt**, but it appears that either of the above algae, and other, similar looking ones such as various *Laminaria* species, and *Iridaea* spp., the iridescent seaweeds, can all be called by this term (CJ, IJ, JT). When she saw *L. groenlandica*, IJ said that it looked like the "hair" (fronds) of the bull kelp (*Nereocystis luetkeana*), but CJ said, "No, that's a **ƛ̓oʕqʷapt**".

Both IJ and CJ noted that herring deposit their spawn on both the bubbly (*Hedophyllum*) and smooth (*Laminaria*) types of **ƛ̓oʕqʷapt**, and that the spawn-coated fronds were harvested, and the spawn peeled off and eaten fresh, or left on the alga and dried for later use. However, they said that the smooth type was preferred for harvesting herring spawn, because it is harder to peel the spawn off the bubbly type. JT said that sometimes the alga was simply eaten along with the spawn.

The Nitinaht used to travel up to Barkley Sound to obtain herring spawn, since the herring hardly ever spawn in the Nitinaht area (JT) (see also *Phyllospadix* spp.—surf-grasses, *Thuja plicata*—red cedar, and *Tsuga heterophylla*—western hemlock).

The Nitinaht term **ƛ̓oʕqʷapt** appears to be related to the Hesquiat Nootka name **ƛ̓uqʷa-qmapt**, applied to *Macrocystis integrifolia* Bory, specifically to the fronds with herring spawn on them (Turner and Efrat, 1982), and with Manhousat "**tl'uukwaḵmápt**" (cf. "**tl'uuḵw**" 'wide'), applied to a wide-leaved alga, possibly *Agarum* sp., from which herring spawn was harvested (Ellis and Turner, 1976)*. It seems likely that the Nootka name, like the Nitinaht, is a general one, applied to various species harvested for herring spawn.

Lessoniopsis littoralis (Farlow & Setchell) Reinke (Short Kelp)

ɬuc̓ɬuc̓pt (also applied to *Postelsia palmaeformis*, the sea palm) (IJ)

The above term was apparently more properly applied to *Postelsia* (JT), although IJ did not seem to differentiate between the two species. She felt that *Lessoniopsis* was just the "new ones growing"—a younger stage of *Postelsia*. She noted that it is "real strong". CJ said that it travels on the rocks to the depth where it wants to stay (see also *Phyllospadix*—surf-grass).

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* Terms quoted from Ellis and Turner (1976) were transcribed by R. Bouchard, using a practical orthography presented in Appendix I of Ellis and Swan (1981). Although the reference is cited as Ellis and Turner (1976), the terms were all rechecked by Bouchard in 1982 and some were altered from the original 1976 versions. When Hesquiat and Manhousat terms cited are identical, only the orthography used in Turner and Efrat (1982) is shown, since it is the same as that used here for Nitinaht. A number of the Manhousat names are also shown in Ellis and Swan (1981).

Young Nitinaht boys used to play a type of "beach hockey" game, using ordinary driftwood sticks, or, sometimes, the flattish, hardened stipes of this alga or similar types. The ball, about 3-4 cm in diameter, was carved from the hard, rubbery holdfast of *Lessoniopsis*, or of *Postelsia*, or possibly of *Pterygophera californica* Ruprecht (cf. Fenn *et al.*, 1979). This game was called **ƛiqalaʔ**. At Clo-oose, it was played on the long sandy beach just south of the Cheewhat estuary. There were no goals, just a centre line from which the game started. The beach was several kilometres long, and whoever had the ball closest to their end when the tide came up would be the losers. The game, played of necessity between tides, could thus last up to five or six hours (JT). A similar game was played by the Nootka peoples to the north (Ellis and Turner, 1976; Fenn *et al.*, 1979; Turner and Efrat, 1982).

IJ's family made a salve from the burned stipes of this alga, or more probably *Postelsia*, or possibly either, that was rubbed on the spines of young boys to strengthen their bodies (see *Postelsia* for details).

There does not appear to be a cognate Nootka form for the Nitinaht term, **ƛuc̓ƛuc̓pt** (see also under *Postelsia*).

Nereocystis luetkeana (Mertens) Postels & Ruprecht (Bull Kelp) (Figure 39)

whole plant: **wa·qa·t** (cf. **wa·q** 'having the foreskin back on the penis; circumcised; and **-a·t** 'extending downwards') (JT)

float, or "bulb": **qa·qa·t** (lit. 'head') (JT)

leafy fronds: **ƛata·bʔub** (lit. 'human hair') (JT)

fishing line of kelp: **sadaʔbƛ**

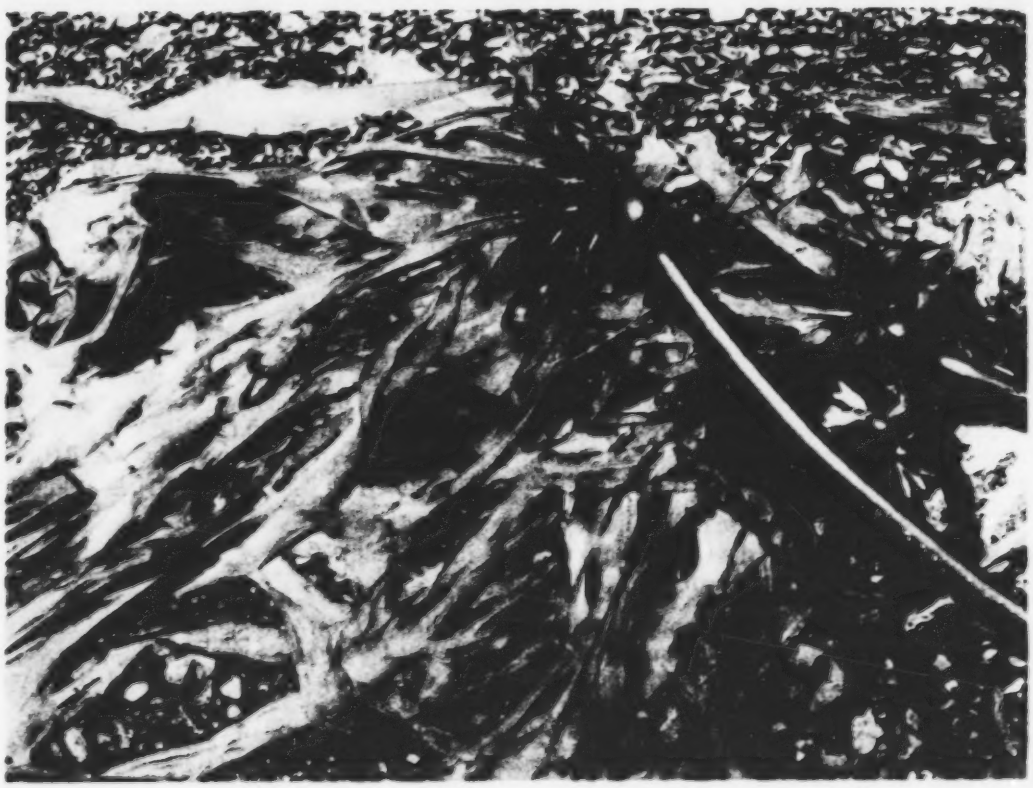

Fig. 39 Bull kelp *(Nereocystis luetkeana)*. (Robert D. Turner)

This was by far the most important marine alga in the Nitinaht economy. The long, thin stripes were used, as they were by the Makah and Nootka (Gunther, 1973; Fenn *et al.*, 1979; Ellis and Turner, 1976; Turner and Efrat, 1982) and by other coastal peoples (Turner 1979), as fishing line. They are solid for most of their length, and can grow up to 25 m long (Scagel, 1967). JT described the process of preparing the lines for use. He noted that the stipes were harvested only from certain places, such as off the rocky point just north of the mouth of the San Juan River at Port Renfrew, where they grow long and thin. They were cut off near the base by young men who were specially trained in deep-water diving as part of their preparation for whale hunting. These same young men would be the ones who would tie the whale's mouth shut after the animal had been harpooned. They could dive down 10 or more metres (20 or 30 ft.). Arima (1975-76) reports that kelp for lines was collected after having been washed up on the beach after a storm, or cut with a knife attached to a long pole. Small-headed kelps were used and solid sections were preferred.

Once harvested, the kelp stipes were laid out on the roof of a house, partially dried, then rubbed with oil, preferably of dogfish, because this was easy to get and is not as good to eat as whale or seal oil. More oil was rubbed in over the entire length every few days or so—every time the oil penetrated and the surface of the line looked dry. When the line was thoroughly saturated—when the oil stayed on the surface of the line—the curing process was complete. This would usually take a year or so. The line could then be coiled up and stored, but before being used, it had to be soaked in sea water overnight to make it totally pliable. The same oiling process was used in curing a mussel-shell whaling-harpoon head or a chisel, only in these cases, the procedure might take up to two years.

A kelp line could be used either for trolling for salmon or for catching bottom fish such as cod and halibut (JT). Two or more lines could be tied together using a fisherman's knot (see Figure 30, p. 36). Usually the hook was attached to a leader of spun nettle fibre (*Urtica dioica*), which was in turn attached to the kelp line. Once the kelp line had been properly cured, it was not necessary to re-oil it after every use; the line was simply dried, coiled, and hung up until needed when it would be soaked overnight again before use. Unlike a modern nylon fishing line, a kelp line was said to be easy on the hands. It was not necessary to wear gloves when hauling it over the side of a canoe or boat because the line is soft and the oil in it acts as a lubricant. However, a kelp line will wear out after a certain amount of use because it undergoes considerable stress when it gets pulled over the side of a canoe (JT). Kelp lines had passed out of use at least by the end of the nineteenth century (Arima, 1975-76).

The hollow portion of the kelp stipe, along with the attached bulb, was used as a container for storing oil, either dogfish oil or edible whale or seal oil. JT said that a piece of stipe about a half a metre long (about 1 ft. of stipe, plus the bulb itself) would be used. He was not sure how the stipe would have been prepared or cured, but felt that it would have been dried before use.

The bulb portion of the kelp was also used, after being dried, as a mold for a type of skin cream, made from the stomach fat of a deer, and called **hibkis**. It was melted, then poured into the kelp float and allowed to harden, after which the kelp would be peeled off, leaving a bulb-shaped piece of tallow that could be carried around and used when necessary as a skin cream, or cosmetic, to protect the face from sun, wind, or cold. Often the aromatic resin of cottonwood buds, or pine pitch, was mixed with the melted fat (JT, IJ). The Nootka also made this skin cream, in a similar manner (Fenn *et al.*, 1979; Turner and Efrat, 1982).

Yet another use for the hollow kelp bulb was in preparing curved, molded halibut hooks. These were made from the knots of some types of trees, such as hemlock (*Tsuga heterophylla*). The knot was halved or quartered lengthwise, each piece carved to the correct proportions, and then several were inserted into a kelp bulb a little longer than the knot sections. A little water was added, and the opening plugged with a cylindrical piece of wood or a wad of moss (see Figure 27, p. 34). The kelp bulb was then buried upright overnight in the hot sand next to a fire. In the morning, the carved piece of knot was removed and carefully bent to the desired shape, then allowed to cool and dry (see also *Hooks, for Halibut* in Plant Materials section).

The leafy fronds of the bull kelp were sometimes used by fishermen to cover their fish in a canoe so they would not spoil or dry out (JT).

The Nootka name for bull kelp [cf. Hesquiat and Manhousat, **husmin** (Turner and Efrat, 1982; Ellis and Turner, 1976)] is not related to the Nitinaht name, and no Makah name is given by Gunther (1973) or Densmore (1939). However, the Hesquiat and Manhousat terms for kelp stipes and kelp rope, **sanapa·ɬ** and "**sanap'aalh**" respectively (Turner and Efrat, 1982; Ellis and Turner, 1976), are cognate with Nitinaht **sada?bɬ**.

Porphyra perforata J. Agardh. (Edible Seaweed, or Red Laver)

c̓a·ypiš (also a general term for all types of seaweed) (JT, IJ, CJ)

This seaweed and related species were eaten by many coastal groups (cf. Turner, 1975), but it appears that they were not originally used as food by the Nitinaht (JT, IJ, CJ), nor by the neighbouring Nootka (Fenn *et al.*, 1979; Turner and Efrat, 1982). CJ noted that the Indian people "up north" (presumably the northern end of Vancouver Island) eat it, and that they sun-dry it and press it into cakes that look like chewing tobacco: "You just bit it off." When JT was young, he and other members of his family gathered this seaweed in late June and July and sold it to the Chinese (and probably also Japanese) people in Victoria for 10 cents a pound. A freight truck would pick it up from them along the Sooke road and deliver it to Victoria. He noted that by the middle of July and in August, it was too old and tough to eat.

The Nootka name for this and similar species [cf. Hesquiat, **ʕumumc** (Turner and Efrat, 1982 and Manhousat "**7ʊ:mumits**" (Ellis and Turner, 1976))] is not linguistically related to the Nitinaht (see also general discussion under ALGAE).

Postelsia palmaeformis Ruprecht (Sea Palm) (Figure 40)

ɬuc̓luc̓pt (JT)

The above name was also applied to *Lessoniopsis littoralis*, another tough-stiped, brown alga of the heavy-surf, intertidal areas (see previous discussion). JT felt that the name had some connection with the Nootka word for "woman". The tough, rubbery holdfast of this alga, and undoubtedly of other, similar species, was carved into the ball, called **k̓iqaɬʔa·c̓k**, used in the "beach hockey" game, **k̓iqalaʔ**, described earlier (JT).

The entire plant was burned in a fire and the ashes were used medicinally in various ways. If a person had convulsions, or if he went "crazy", the ashes were rubbed on his face to calm him down. They would not necessarily keep a supply of the ashes around; the plants were so common that they could be gathered and prepared for use anytime they were needed. The ashes were also mixed with water, which was then taken internally, but JT did not know what ailment this would have been for: "So many things you see a doctor doing, they don't tell kids . . . even if I asked, they wouldn't tell me." (JT).

Fig. 40 Sea palm (*Postelsia palmaeformis*).
(Nancy J. Turner)

IJ's family made a salve from the stipes of the sea palm, or possibly *Lessoniopsis*, or perhaps of either, by drying them in the summer, then burning them, powdering the charcoal, and mixing it with raccoon bone marrow. Right from the time a baby boy was born, this salve was rubbed on his back, over the spine, to give him strength: "He's going to be a strong man when he grows up—long life." (IJ). This plant was used similarly by the Nootka. The Ahousat, for example, rubbed the ashes on the joints of whalers and long-distance runners to give strength (Fenn *et al.*, 1979). Manhousat whalers rubbed four to eight pieces of fresh plant on their arms to make them strong (Ellis and Turner, 1976). These uses all seem to be related to the tough, resilient properties of this alga; it can withstand the heaviest of surfs without breaking, and always springs right up again.

There is apparently no cognate Nootka form for **ɬuc̓ʎuc̓pt**. The Manhousat name for *Postelsia* given by Luke Swan, "**huhts'apt**" (Ellis and Turner, 1976), was applied by Alice Paul of Hesquiat to *Fucus* (Turner and Efrat, 1982), and does not seem related to any Nitinaht alga name.

Spirogyra spp. and Other Fresh-water Algae ("Green Pond Slime")

ʕubqabs (also applied to *Enteromorpha intestinalis)* (JT)

The above name is a general one; these plants apparently had no use by the Nitinaht (JT). The Hesquiat Nootka terms applied to "green pond slime" translate as 'river **ʕumuc**' or '**ʕumumc** under (water)', and hence relate it nomenclaturally to *Enteromorpha, Ulva,* and *Porphyra* in Hesquiat (Turner and Efrat, 1982).

Ulva lactuca L. and Related Species (Sea Lettuce)

This was recognized as being similar to *Porphyra,* the edible seaweed, but IJ said it had no use, and no Nitinaht name. The Hesquiat and Manhousat Nootka also recognized *Ulva* as being similar to *Porphyra,* and applied the same general names, **ʕumumc** and "**ʔumumits**" respectively, to both (see also previous species) (Turner and Efrat, 1982; Ellis and Turner, 1976).

LICHENS

Lichens were usually called by the same general name as mosses and liverworts (except, see *Peltigera* spp.), **ƛ̓uʔup**. Those growing on trees (e.g., *Alectoria, Cetraria,* and *Usnea* species) could be further differentiated by naming the species of tree on which they grew. Hence, a lichen growing on spruce would be called **tuχupati·c ƛ̓uʔup***, one growing on hemlock would be **q̓ʷiʎapati·c ƛ̓uʔup***, and one on grand, or "balsam", fir would be **čabsapati·c ƛ̓uʔup*** (CJ, IJ, JT). As CJ explained, "Moss is one name for it, all the moss—**ƛ̓uʔup**—but we go by the branch and tree". The Hesquiat, Manhousat, and other Nootka peoples also applied the same general term, **ƛ̓uʔup** to most mosses and lichens and also specified some lichens by the type of tree they were growing on (Turner and Efrat, 1982; Ellis and Turner, 1976; Fenn *et al.*, 1979). (See also under BRYOPHYTES).

Alectoria sarmentosa (L.) Ach., *Usnea longissima* Ach., and related species (Figure 41)
("Maidenhair Moss", or "Old Man's Beard")

These lichens were valued for their absorbent qualities and were gathered, for use as wound dressing material, for baby diapers, sanitary napkins for women, and for wiping salmon (IJ, JT). IJ said, "They are always looking for that." JT observed, on seeing a specimen of *Usnea longissima,* that when it is pulled apart it is creamy inside. He said that as an "Indian bandage" it could be wrapped around a wound and left for awhile.

Peltigera canina Willd. and related species (Dogtooth Lichen)

ʎaʎχ̓ʔa·ʔaq (lit. 'the ones flat against the rock') (MT); or **ʎi·ʎi·dqʷaqsibaƙkʷ** (lit. 'resembling whale's baleen') (LJ) (see also *Adiantum pedatum*—maidenhair fern)

Neither MT nor LJ knew of any use for this lichen. LJ said it was just a plain **ʎaqpat** [(small) plant]. IJ described a plant, possibly this species or *P. aphthosa* Willd., which an old woman had used many years ago to cure a man who could not urinate (see Unidentified Plants, Appendix 1).

When shown a specimen of *P. aphthosa*, LJ remarked that there was a plant that looked just like that, but which had white flowers, that was chewed and eaten as a remedy for tuberculosis. It was called **ƛ̓itidiċč̓ʔa·** (lit. 'rocks growing on/attached to the rocks'). Densmore (1939) gave a similar

* The suffix -ɬc signifies 'belonging to'.

Fig. 41 "Old man's beard" lichen (probably *Alectoria* sp.). (Nancy J. Turner)

name in Makah, "**didi'dichia**", also meaning 'growing on rocks' for "a fungus found on rocks and used for running sores that were hard to heal. It was mashed and made in a poultice and was used especially for sores on the leg caused by bruises from walking among rocks." In view of Densmore's Makah name and description, it seems likely that LJ really was referring to *P. aphthosa* and that she was mistaken about the plant having white flowers (see also Unidentified Plants, Appendix I). The Hesquiat Nootka did not recall a name for *P. canina*, but remembered that it was used for some kind of medicine (Turner and Efrat, 1982).

FUNGI (Including Mushrooms and Tree Fungi)

Mushrooms were called by the general name of **ci·ciyapqaʔs*** (lit. 'having hats on the ground') (JT). They were apparently not used in any way. Densmore (1939) noted that the Makah used the spore powder of "*Calvatia lilacina* Berk"** (probably other types of puffballs as well) to heal sores on the leg, and to check a hemorrhage. The Hesquiat Nootka did not recall a name for mushrooms (Turner and Efrat, 1982).

Ganoderma applanatum (Pers. ex Wallr.) Pat., *Fomitopsis pinicola* (Sw. ex Fr.) Karst., and similar species (Bracket Fungi, Shelf Fungi) (Figure 42)

dayaču? (lit. 'echo') (JT, IJ)

Bracket fungi were called 'echo-maker' in at least some of the neighbouring Salish languages, such as Straits (Turner and Bell, 1971) and Squamish (Kuipers, 1969). For IJ's family, they were considered important protection against people who harboured ill feelings towards one. She said that when a person is walking around in the bushes or thick woods if he hollers, this fungus will quickly answer him back, like an echo, in his own voice. If somebody were against a person in IJ's family

* The **-q-** appearing in this and a number of other Nitinaht plant terms is an element indicating 'plant', in a way similar to the **-apt** suffix.
** Now *C. cyanthiformis* (Bosc) Morg.

Fig. 42 Bracket fungus (*Fomitopsis pinicola*). (Robert D. Turner)

and wished sickness or death for him, the person needing protection would take the fungus, pray to it for about four days, then draw eyes and big teeth on it (on the white underside) and place it outside in a secret spot where no one would see it. Then, if anyone said bad things, the fungus would answer back, "give it back to whoever's against you." If someone wished the person would die, the fungus would deflect this wish and send it back to the person who sent it, and he would die instead (IJ). The Squamish also considered tree fungi to have protective powers and hung them up in the house to protect the inhabitants from evil thoughts (Kuipers, 1969).

When shown a smaller polypore, *Coriolus versicolor* (L. ex Fr.) Quel., IJ said it was called by the same name as the larger types but was not used.

The Hesquiat Nootka name for bracket fungi, **ḱi·čk** (cf. **ḱi·čkkʷačyu** 'completely wrinkled'), is not linguistically related to the Nitinaht, and no belief about their association with echoes was reported (Turner and Efrat, 1982). However, some Nootka did use the fungi as a hunting charm (Fenn *et al.*, 1979).

BRYOPHYTES (Mosses and Liverworts)

Almost all mosses, liverworts, and lichens were called by the general name **p̓uʔup** (CJ, IJ, JT) but there were some exceptions (e.g., *Peltigera* spp., *Polytrichum juniperinum*, and *Conocephalum conicum*). When shown several moss species, including *Hylocomium splendens* (Hedw.) B.S.G., *Rhytideadelphus loreus* (Hedw.) Warnst., and *Polytrichum commune* Hedw., IJ and CJ recognized them as being different from each other, but knew of no specific names for them. LJ, however, stated that *Polytrichum juniperinum* was not a type of **p̓uʔup** and gave it a different name (see under species discussion). *Sphagnum* moss was recognized by both IJ and MT both by its habitat and its absorbent qualities, but was not given a special name—it was just called **p̓uʔup**.

Mosses, particularly the absorbent types, were used generally in the household for wiping the hands, as baby diapers and sanitary napkins for women, and particularly for wiping the slimy coating off salmon before it is dried. (Salmon was never washed with water before it was cooked or dried because the skin would shrink.) IJ noted that people used to pick large quantities of moss (and

lichens—see *Alectoria* and *Usnea*) in the summer, dry it and save it in boxes or baskets, then use it later "just like a towel, wiping salmon when they're cutting it."

Mosses and lichens were also called **p̓uʔup** by the Nootka, and were used generally for wiping (Turner and Efrat, 1982; Ellis and Turner, 1976; Fenn *et al.*, 1979). The Makah term, "**pū'ū'p**", was applied specifically to *Sphagnum* sp., which was used for its absorbent qualities (Gunther, 1973), but was probably also applied at a general level to mosses and moss-like plants (see Densmore, 1939).

William's Beach at the British Columbia Forest Products townsite development near Port Renfrew is called "**poʔopabethl**" (Arima, 1975-76).

Conocephalum conicum (L.) Dumort. (a Thallose Liverwort) (Figure 43)

ƛ̓aƛχaʔs (LJ)

IJ and CJ were not shown this liverwort; possibly it is the plant IJ saw being used for stoppage of urine, described under Unidentified Plants (Appendix 1) (see also *Peltigera canina*). As a young girl, John Thomas' sister, Flora Joseph, was told that this plant was used as a medicine for the kidneys. MT recognized the plant but did not know of a Nitinaht name for it. She used it as an eye medicine, probably for cataracts. Since her eyes were bothering her at the time she was interviewed, she was very pleased to take the sample we brought to make some of her medicine. Unfortunately, she gave no details as to its preparation. LJ had not heard of its use as an eye medicine and noted that "different people use the same plant for different medicines." She recalled that **ƛ̓aƛχaʔs** was gathered at the spring in the small cove just south of Whyac and that it was eaten by a person who had recurring dreams of having sexual intercourse with a person who was deceased. It was felt that if such dreams were not stopped, the dreamer would soon "join his dream" and would die (LJ, JT).

Another thallose liverwort (*Pellia* sp.) may also have been used medicinally (see Appendix 1—**bayaɬsiʔ**). No Nootka or Makah terms for *Conocephalum* were given in the literature sources consulted.

Fig. 43 Thallose liverwort *(Conocephalum conicum)*. (Nancy J. Turner)

Mnium species (Mnium Moss)

IJ, CJ, and JT simply called various *Mnium* group species by the general name **p̓uʔup**. Densmore (1939) noted that *Mnium punctatum* L. was considered a "moss by the Makah, but that it had medicinal value, as a remedy for swelling on the legs, regardless of the cause of the swelling."

Polytrichum commune Hedw. (Hair Moss)

This was called by the general name **p̓uʔup** but MT noted that it was chewed by a woman throughout labour and that it helped to speed up the labour.

Polytrichum juniperinum Hedw. (Juniper-leaved Hair Moss)

tu·tu·χubqaḵ̓kʷ (lit. 'looks like spruce tree') (LJ)

Initially, LJ applied the above name to *Polytrichum*, but later thought it might be more properly applied to *Lycopodium selago*, which was used as a purgative. However, Densmore (1939) gives a name of similar connotation in Makah, "**sussuch'ku**", ("resembling a tree"), to *Polytrichum* sp., an indication that LJ's first application of the name may well be correct. Densmore also mentioned a woman whose father had told her to eat this freely but who was not able to elaborate. Possibly this refers to use during labour (see previous species).

Sphagnum spp. (Sphagnum Mosses) (Figure 44)

As mentioned previously, no generic-level name was applied to *Sphagnum* species, but MT stated that it was used particularly for baby diapers and that it was regarded as a good disinfectant. The Makah used it for wound dressings and, apparently, bedding (Gunther, 1973).

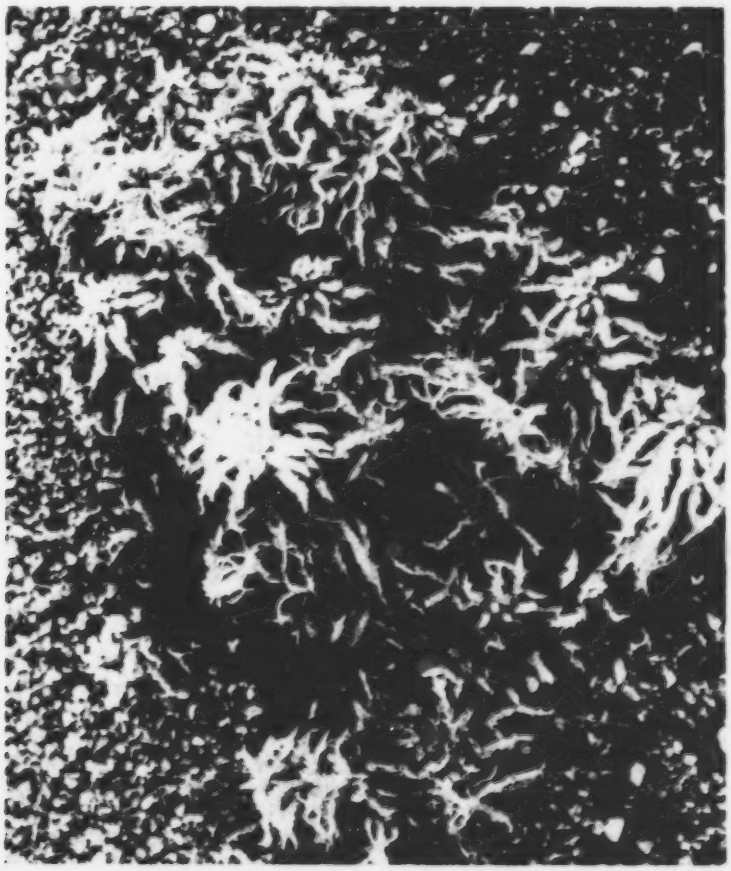

Fig. 44 Sphagnum moss (*Sphagnum* sp.). (Nancy J. Turner)

PTERIDOPHYTES (Ferns and Fern-allies)

EQUISETACEAE (HORSETAIL FAMILY)

Equisetum telmateia Ehrh. (Giant Horsetail)

fertile shoot: **baʔax** (JT, IJ, CJ)

vegetative shoot: **ɬu·xʷsi·p** (CJ, IJ)

The first name, **baʔax**, is cognate with the Makah name for this plant, "**ba'axbupt**", (Gunther, 1973). Both fertile and vegetative shoots were eaten when young by the Nitinaht (JT). The Makah also ate the young fertile shoots (Gunther, 1973), while the Nootka groups to the north ate either their fertile shoots (Fenn *et al.*, 1979) or the young vegetative shoots (Turner and Efrat, 1982). According to JT, the shoots are ready to eat in April and early May, and the most tender, juicy ones are found where the ground is mossy. They were pulled up from below the ground level. The part nearest to the base, where the nodes are closest together, is more tender than the aerial portion. Only the lower three-quarters or so of the vegetative shoots was eaten. Both the stem and strobilus of the fertile shoots was eaten. One could simply peel off the nodal fringe of fused leaves and eat the stem portion raw.

As well as being a good springtime food, horsetail shoots were also regarded as a potential source of water. If one was unsure of the available water supply—if the nearby water might be polluted or affected by cedar poisoning that would give one diarrhoea—he could drink the water from the hollow stem segments of the horsetail (JT).

Gunther (1973) noted that the Makah sometimes ate the small "bulbs" on the rootstock of horsetail, but it is not known if the Nitinaht did as well. Gunther (1973) also mentioned that the Makah ate the fertile shoots as a cure for diarrhoea; possibly this use is related in some way to the Nitinahts' use of the shoots as a source of water in areas where the standing water might cause diarrhoea.

The other species of horsetail, *E. arvense* L., *E. hyemale* L., and others, were apparently not used or named by the Nitinaht, although Arima (1982) notes that the inside of a canoe was rubbed with "rushes," presumably *Equisetum*, which is well known as an abrasive (Turner, 1979). The Makah name for *E. telmateia* has already been mentioned. The Nootka terms (cf. Hesquiat **nit-na·kƛɬ**, for the fertile shoots; and **qʷaqƛ** for the vegetative plants) (Turner and Efrat, 1982), are not linguistically related to the Nitnaht. Giant horsetail was called "**kw'akw'aktl**" in Manhousat Nootka, and the shoots were said not to be eaten (Ellis and Turner, 1976).

LYCOPODIACEAE (CLUB-MOSS FAMILY)

Lycopodium clavatum L. (Running Club-moss)

ha·ya·padačsiʔ [lit. 'something (i.e., "medicine") that gets you confused in the woods'; cf. **pa-waɬšƛ** 'confused, uncertain about orientation'] (CG)

This long, trailing plant is one of CJ's favourites. However, he cautioned that when one is in the woods he should not touch it, and that if one makes a wreath of it and puts in on his head, it would cause him to lose his way. This is because the plant itself branches off in so many directions (CJ). Some Nootka people also held this belief (Fenn *et al.*, 1979). The Hesquiat Nootka name, however, is linguistically unrelated to the Nitinaht (cf. **ɬapɬanimʔak muwač**, lit. 'deer's belt'—Turner and Efrat, 1982). The name for this species also translates as 'deer's belt' in the Haida and Tlingit languages (Turner, 1974).

Lycopodium selago L. [Syn. *Huperzia selago* (L.) Bernh. ex S. M.] (Figure 45)

(Fir Club-moss)

This plant was recalled by JT from his childhood days at Nitinaht. He remembered that it grew at one particular location, in damp, shady woods on the southwestern side of Whyac Lake. Neither he nor MT could recall the Nitinaht name but it was used in JT's family as a fast-acting emetic and purgative. As a child, JT was given four short branches of the plant to "clean him out." This made him very sick and made him "go all day" (empty his bowels). At first, JT gave this information when he saw a specimen of *Polytrichum commune*, a moss, but later, at Whyac Lake, he confirmed the identity as this club-moss. JT felt that the name **tutuɣubqakkʷ** (lit. 'looks like spruce tree'),

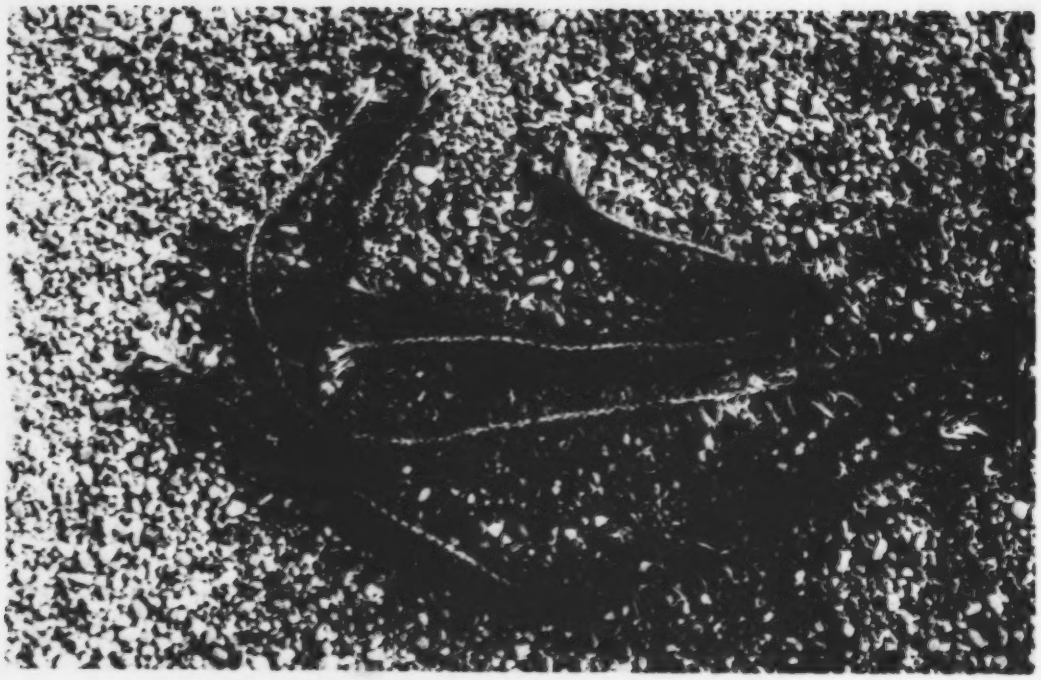

Fig. 45 Fir club-moss (*Lycopodium selago*). (Nancy J. Turner)

originally applied by LJ to *Polytrichum juniperinum* (see under BRYOPHYTES), may well more correctly apply to *Lycopodium selago*. LJ noted that the plant called by this name was used as a "medicine man's towel," to wipe his hands on. IJ and CJ did not see a specimen of this plant but IJ recalled its use as a purgative. MT knew only that it was "strong medicine." No name or use was recorded for this species in any of the Nootka or Makah literature sources consulted.

ADIANTACEAE (MAIDENHAIR FERN FAMILY)

Adiantum pedatum L. (Maidenhair Fern)

ʔi·ʔi·dq̓ʷaqsibaḵ̓ḵ̓ʷapt, or **ʔi·ʔi·dq̓ʷasibaḵ̓ḵ̓ʷ** [lit. 'looks like whale's baleen (plant—first term)'; cf. **ʔi·dq̓ʷaqsib** 'whale's baleen'] (IJ, CJ, JT)

These names are used because the delicate fronds resemble the brush-like "teeth", or baleen, inside a whale's mouth (CJ). Although IJ said this fern had no medicinal use, JT recalled that dancers used to rub it on their feet and ankles to make them light-footed. Nootka dancers and athletes also considered this plant a "good medicine" (Fenn *et al.*, 1979). Hesquiat dancers drank an infusion of ashes of maidenhair fern fronds and some other ingredient, to give them strength and endurance and make them "light on their feet." They also chewed the fronds to obtain the same effect (Turner and Efrat, 1982). The Makah chewed the fronds as a remedy for stomach trouble, sore chest, and internal hemorrhaging (Densmore, 1939). They also used an infusion of the leaves as a hair wash and used the shiny, black stems for design in basketry (Gunther, 1973), but it is not known whether the Nitinaht did as well. The Nitinaht names do not appear to be cognate with either Makah or Nootka terms for this plant (cf. Makah, "**tlotlotc'sa'dit**"—Gunther, 1973; and Hesquiat, **yuxsmapt**—Turner and Efrat, 1982).

ASPLENIACEAE (SPLEENWORT FAMILY)

Athyrium filix-femina (L.) Roth. (Lady Fern), and *Dryopteris austriaca* (Jacq.) Woynar (Spiny Shield Fern, or Spiny Wood Fern)

ʔicipt

These ferns were considered to be very similar and no distinction was made between them. The fronds of either were sometimes used in place of bracken fronds (see *Pteridium aquilinum*) to place in layers below and above food being cooked in an underground steaming pit or, more recently, in a stove-top steaming kettle (JT, IJ). JT sometimes calls them **ɬiχa·**, the name for bracken fern. The Makah ate the "bulbs" on the roots of lady fern and used the fronds as a charm to aid a woman in labour during childbirth (Densmore, 1939), but the Nitinaht apparently did not use the plant for these purposes. The Nitinaht name is related to the Hesquiat Nootka terms **ʔicmakt**, or **ʔicmapt**, for sword fern (see *Polystichum munitum*).

Polystichum munitum (Kaulf.) K.B. Presl (Sword Fern) (Figure 46)

fiddlehead shoots: **ɬiɬeʕs** [lit. 'crouching, sitting down (on the ground)'; cf. **ɬiʕa·s** 'crouching, or sitting on the ground, outside the house']

plant: **ɬiɬeʕsapt** (after the fiddleheads) (IJ, CJ, JT); *or* **pila·pila·pt** (lit. '**pila·pila·** plant', after the game called **pila·pila·**) (JT)

IJ recalled that the Nitinaht used to eat the large rootstock after the fronds had matured, in July or August. She said, "You can see, when it [the rootstock] starts peeling off, inside is the food. It's big, . . . like corn . . . but it's long, where the food is, you pull it out, or peel it . . . break it." The rootstocks were steam-cooked in underground pits. The edible portion referred to by IJ is apparently the embryo shoot tissue of the next year's fronds. The Makah also ate the rootstocks, after boiling them (Gunther, 1973), and they were eaten by a number of other Coastal groups as well (Turner, 1975).

Fig. 46 Sword fern (*Polystichum munitum*). (Nancy J. Turner)

The mature fronds along with bracken and other types of fern fronds, were sometimes used by the Nitinaht to place under and above food in steam-cooking pits (JT). They were also laid side by side, several layers thick, to make a type of "place mat" on which to lay food at feasts (JT).

CJ commented on the fiddlehead formation of the young croziers: "It looks funny when it starts growing because it curls up . . . and when it starts growing it straightens up and straightens up until . . . (only) the top is curled." As noted previously, the entire plant is named after the fiddlehead shoots.

The second name given for this plant, **pila·pila·pt**, is from a type of "game" played with the fronds by the Nitinaht, Makah, some Nootkan groups, and a number of Coast Salish groups also (JT; Gunther, 1973; Fenn *et al.*, 1979; Bouchard and Turner, 1976). Deer fern fronds were also sometimes used (Bouchard and Turner, 1976). The "game", called **pila·pila·**, was actually more of a contest that would heighten the prestige of the winner than a purely recreational sport. It was held at ceremonial potlatches, and only certain people had ancestral rights to hold it (JT). In it, a contestant held his breath and began pulling off the pinnae from the main stem, or rachis, one at a time, saying "**pila·**" with each one. The person who could pull off the most pinnae without taking a breath was the winner.

JT described a modern version of the **pila·pila·** contest, that he saw done when he was young. A line was strung across the room or house and clothespins were lined up along its length. A contestant then had to detach the clothespins one at a time, saying "**pila·**" with each, to see how many he could get without taking a breath.

Gunther (1973) records the Makah name for this plant as "**pila'pila'bupt**", and also gives the terms, "**ts'ikwi'**" for the "roots" and "**tsato'tsa**" for the young growth. The Hesquiat Nootka names for sword fern, **ʔicmakt**, or **ʔicmapt** (Turner and Efrat, 1982), seem to be related to the Nitinaht name for lady fern (*Athyrium filix-femina*) and spiny shield fern (*Dryopteris austriaca*). The Nitinaht term for sword fern, **ƛ̓iɬeʕsapt**, from the fiddleheads, is apparently unique to that language.

Blechnaceae (Deer Fern Family)

Blechnum spicant (L.) Roth (Deer Fern)

ƛ̓ibeʕtaƛ̓kʷapt (lit. 'sockeye-like plant') (IJ, JT)

It is not known why this fern is called 'sockeye-like plant'; perhaps it is because of the overall shape of the vegetative leaves, which are somewhat fish-like. The fronds were used in steaming pits, being placed below and above the food being cooked (IJ). IJ noted that when one is lost in the bush he can eat the fronds of deer fern, and also salal leaves, to relieve hunger, or, apparently, to suppress the hunger pangs. The Makah and Nootka peoples also ate this fern when lost (Densmore, 1939; Fenn *et al.*, 1979; Turner and Efrat, 1982). It was said that a man could subsist on deer fern for several days (Densmore, 1939). The Makah also ate the leaves for "distress in the stomach" and for lung trouble (Densmore, 1939), and a Hesquiat woman chewed them for "internal cancer" and lived a long life (Turner and Efrat, 1982). Other Nootka regarded the fronds as a good overall medicine or tonic (Fenn *et al.*, 1979).

The Hesquiat Nootka name for deer fern, **ka·cku·xsmapt** [lit. 'standing up (from the ground) plant'] (Turner and Efrat, 1982), is not related linguistically to the Nitinaht; neither is the Makah name, "**l'l'ts'buk'uk**" [lit. 'resembling **l'itsba** (possibly sword fern)'] (Gunther, 1973; Densmore, 1939).

Dennstaedtiaceae (Hay-scented Fern Family)

Pteridium aquilinum (L.) Kuhn (Bracken Fern, or Brake Fern)

rhizomes: **ƛ̓ƛ̓ʔa·** [lit. 'continually moving (household)' cf. **ƛ̓i·ƛ̓uk**ʷ 'moving'] (IJ, JT) ("the root for it", "the food"—IJ)

plant: **ƛ̓ƛ̓ipt** ((IJ, JT) ("the stem")—IJ)

The long, thick rhizomes of this fern were, along with cinquefoil roots (*Potentilla pacifica*), wild clover rhizomes (*Trifolium wormskioldii*), and edible camas bulbs (*Camassia* spp.), among the most important "root", or underground foods of the Nitinaht (IJ, CJ). Unfortunately, they are now believed to be carcinogenic, along with other parts of the plant (Miller, 1973), and cannot be recommended as a food until further research is carried out on this aspect of the plant.

The rhizomes were dug up with straight, sharpened digging sticks, usually made of yew. They were believed to be mature and ready to eat only after the fronds start to die and turn brown in the fall; when the fronds are still green, it was felt, the rhizomes would be too small (IJ). The rhizomes were washed and tied in fist-sized bundles about 0.3 m (1 ft.) long. A length of rhizome, or bracken stem, was used to tie each bundle, and every women used her own special knot so that she would be able to recognize her bundles after the rhizomes were cooked. The rhizomes were steamed traditionally in large communal cooking pits, described in detail in the introductory section on Food Plants. After placing a thick layer of salal branches and bracken fronds over the red-hot rocks at the bottom of the pit, the women would place their bundles into the pit in layers, called **papaƙʷpaɬ**, alternating in direction, separated by layers of bracken fronds. Each woman would remember how far down her layer of bundles was and could recognize them by her special knot in any case. When all the bundles had been placed in the pit, they were covered with more bracken fronds and salal branches, then with cedar-bark matting and, finally, with sand. After water was added to start the steaming process, the pit was left for up to 24 hours before being opened. At that time, each woman would claim her own bundles, take them home, dry them thoroughly, and store them for winter. For winter use, the bundles were soaked overnight in water and then eaten as the vegetable portion of the meal, with meat or fish (IJ). Bracken rhizomes were usually cooked by themselves because they required larger-sized cooking rocks than cinquefoil, clover, or camas (JT). When iron kettles and stoves became available, bracken rhizomes and other "root" foods were sometimes steamed in pots on top of the stove, but they were still tied in bundles and placed in layers interspersed with bracken fronds (IJ).

Bracken rhizomes could also be roasted for eating. They were placed right in the coals of a fire and turned frequently to prevent burning. They were then pounded until the outer skin came off; the inner part was then eaten (IJ). The Makah, Nootka, and most other groups on the Northwest Coast also ate roasted or steam-cooked bracken rhizomes (Gunther, 1973; Fenn *et al.*, 1979; Ellis and Turner, 1976; Turner and Efrat, 1982; Turner, 1975).

Bracken fronds, aside from their use in steam-cooking pits, were used by the Nitinaht for bedding. When people were out camping they usually slept under their canoes with a thick layer of bracken as a mattress (JT). The Makah also used the fronds for laying fish on and for wiping the slime off fish (Gunther, 1973).

The Nitinaht name, **šiƛa·**, is related to both Makah ["**sik!la'**" (Gunther, 1973)] and Nootka [cf. Hesquiat and Manhousat, **šiƛa·** (Turner and Efrat, 1982; Ellis and Turner, 1976)] names for bracken.

POLYPODIACEAE (POLYPODY FAMILY)

Polypodium glycyrrhiza D.C. Eat. (Licorice Fern) (Figure 47)

ƛ̓a·ʕasi·p (lit. 'tendency to grow on the ground'; cf. **ƛ̓aq** 'grow, sprout'; **-'as** 'ground'; **-i·p** 'tendency to be/make') (IJ, JT)

The licorice-flavoured rhizomes were chewed and the juice swallowed for a cough or sore chest. IJ said the juice tastes somewhat sour, and that water was drunk after the juice was swallowed. The rhizomes were used by the Makah, Nootka, and many other Northwest Coast groups as a medicine for colds, coughs and sore throats (Gunther, 1973; Fenn *et al.* 1979; Turner and Bell, 1971, 1973; Turner, 1973). However, in all other cases, Native consultants have commented on the sweet taste of the rhizomes. In fact they are often chewed for their sweet flavour (cf. Fenn *et al.*, 1979).

The Nitinaht name, **ƛa·ʕasi·p**, is linguistically related to the names for licorice fern in some Coast Salish languages: cf., Halkomelem (Cowichan dialect)—"**ƛ̓əsi·p**" (Turner and Bell, 1971), Squamish—"**tl'esip**" (Bouchard and Turner, 1976), and Clallam—"**kla'sip**" (Gunther, 1973). The fact that the name is analyzable in Nitinaht would indicate that the Salish borrowed the term from Nitinaht and not vice versa, but its occurrence in several Salish languages would seem to indicate the reverse. Further research and analysis of the Salish names would be required to resolve the question of origin of the term. To further complicate the problem, it should be noted that the root for the Makah and Nootka names does occur in Nitinaht, as **χi** 'crawl', but is not connected with the licorice fern plant. The Makah and Nootka terms, on the other hand, are related to each other, but not to Nitinaht [cf., Makah—"**xɛ̆xi't**" (lit. 'crawling root on trees') (Gunther, 1973; Note: the translation is Gunther's and apparently slightly inaccurate—JT); Hesquiat and Manhousat **ƛ̓iƛ̓ił** (Turner and Efrat, 1982; Ellis and Turner, 1976)].

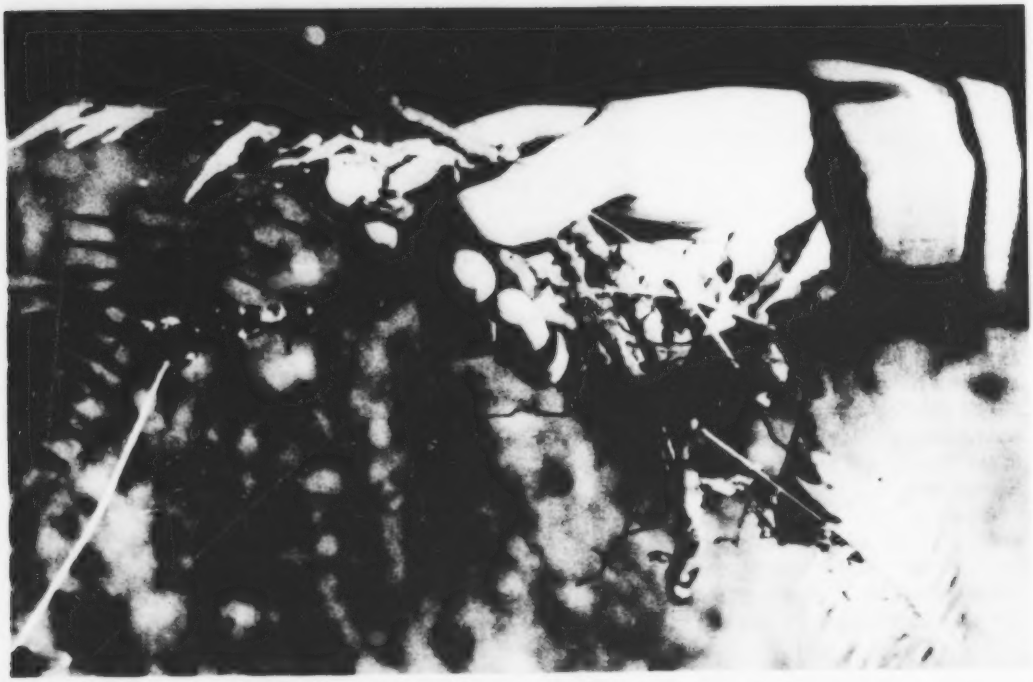

Fig. 47 Licorice fern *(Polypodium glycyrrhiza).* (Nancy J. Turner)

GYMNOSPERMS (Conifers and Their Allies)

CUPRESSACEAE (CYPRESS FAMILY)

Chamaecyparis nootkatensis (D. Don) Spach (Yellow Cedar)

inner bark: **pičip** (also, inner bark of red cedar) (JT)

tree: **bačɬe-ẏtapt** (refers to most common variety) (IJ, CJ)

second variety of tree: **čuk-ʔapt** (cf. **čupaɬ** 'smelling of a bad odour') (JT, CJ) or **mačsapt** (lit. 'match-plant', derived from Eng. "match") (LJ)

CJ recalled that there were two varieties of yellow cedar, the one called **bačɬe-ẏtapt** being the most common. He remembered the name for the second variety later. He did not recall what the differences were between the two types but one possible distinction is that the second variety is stronger smelling, as implied by the name. LJ also knew of the two varieties and gave the second variety the English-derived name of **mačsapt**. She said that the wood of this variety, which was redder than the normal yellow cedar wood, was used to make fire-drills. CJ said that one only sees the first variety nowadays. LJ recalled that there was a good stand of this variety along the shore of Nitinat Lake, a couple points east of Hobarton village, just behind Lady Falls.

Yellow cedar was used by the Nitinaht for the manufacture of some items, such as light paddles and small charcoal-mixing boxes, and even, occasionally, for canoes, but CJ noted that it cracks easily if left in the sun. LJ said her husband made a canoe from it once, but it just cracked. Recently, the wood has been used for various small carvings, such as totem pole models, and talking sticks (CJ, JT).

The fibrous inner bark of yellow cedar was harvested in a similar way to that of red cedar. Because it is finer and softer than that of red cedar, it was a preferred material for clothing, especially

Fig. 48 Mrs. Mabel Taylor of Port Alberni beating yellow cedar bark for clothing, as was done by Nitinaht and Nootka peoples. (Photo taken in 1951 by R. Kenkham. Ethnology Division, BCPM)

babies' clothing and blankets (see Figure 50, p. 69). After being harvested and split into strips, the bark was pounded (see Figure 48) then spun on the bare thigh. Sometimes it was spun together with the bast fibre of the cottonwood tree (*Populus balsamifera* ssp. *trichocarpa*); this latter material added strength and flexibility. Dog wool, from small, specially bred dogs, was also frequently spun together with yellow cedar bark. Wide strips of yellow cedar inner bark were also woven in a checkerboard pattern to make skirts, capes, hats, and blankets (LJ, JT). Finely shredded, the inner bark was used as a towel, to wipe the face, and was also used as tinder (LJ). Arima (1982) provides a detailed description of the preparation of yellow cedar bark.

The Makah apparently did not have direct access to yellow cedar; this tree is not even listed in Gunther (1973). (Nevertheless, yellow cedar does occur on the Olympic Peninsula, generally from lower mountain slopes to the tree line.) The Makah were said to trade north, apparently with the Nitinaht, for yellow cedar "to use in their canoes and houses" [note, however, that these structures were usually of red cedar] (Taylor, 1974), although the exact use of the wood is not given.

The Nitinaht name for yellow cedar, **ba·t'e·ɣtapt**, appears to be unique to this language. It is not related linguistically to the Hesquiat and Manhousat Nootka name, **ʕa·tmapt** (Turner and Efrat, 1982; Ellis and Turner, 1976). However, Alice and Larry Paul of Hesquiat also knew of a "match tree" (see previous discussion), which they called "**machismapt**" (borrowed from English "matches"), or "**aʔiłłhmapt**". A sample collected by them from the Long Beach area, though, was actually shore pine, not yellow cedar (R. Bouchard, pers. comm., 1982). The Makah name, if any, is not known to us.

Thuja plicata Donn ex D. Don (Western Red Cedar)
inner bark: **pičip** (also, inner bark of yellow cedar) (JT)
wood: **ɣubis** (JT)
tree: **ɣubpat** (JT)
withes, or boughs (after removal from the tree and processing): **supsiʔya·t** (JT)
shredding or twisting withes to make rope: **su·psu·p** (JT)
rope of red cedar withes: **su·buqʷa·ʔdɬ** (JT)

All of the terms given (except **pičip**, which also applies to yellow cedar) are specific to western red cedar. This tree was undoubtedly the most important single species in Nitinaht technology, as it was throughout the Northwest Coast Culture Area (cf. Turner, 1979). The soft, easily split, wood was used to make the dugout canoes so important in the Nitinaht economy (see Figures 21 and 22, pp. 28 and 29). The Nitinaht were renowned for their excellent canoes which they sold to the Makah (Taylor, 1974), and probably to other groups as well. Nitinaht carvers were fortunate in having a good supply of red cedar reasonably close at hand; nevertheless, transporting the logs back to the village was often no easy matter. Some of the best red cedar trees for canoe-making were located along the shores of Tsusiat Lake, which runs parallel to Nitinaht Lake, and about 4 km to the north and west. The father of IJ's late cousin, Ada Jack, was a canoe-maker. He and other canoe-makers at and in the vicinity of Whyac used to go up to Tsusiat Lake, select and cut a tree suitable for a canoe, carve the outside to the proper dimensions and partially hollow out the inside, then paddle it down to Tsusiat Falls. Here, the canoe was painstakingly lowered over the falls, a vertical distance of about 18 m, by strong cedar-withe ropes tied to the canoe then wrapped once around a tree at the top of the falls and carefully let out, one tree-circumference length at a time. The partially finished canoe was then paddled back to the beach at Whyac where it could be completed (JT, IJ).

JT stated that the best and strongest canoes (but probably only small ones) were made by splitting a cedar log in half, then using the heart of the tree as the bottom of the canoe. The canoe would then have an "edge grain" all around and will be less prone to splitting or cracking. This practice, called **diχa·bɬʔa·ʔaq** (lit. 'finished product made for the inside out'), was also used in making bowls and masks (JT). However, the usual way of making a canoe, as described in detail in Arima (1975), is to use the entire trunk, with the bulk of the circumference forming the outer hull of the vessel.

JT noted that a canoe was not usually measured in terms of its length but by the width across the bottom and the number of men it would hold. A standard whaling canoe would hold eight men: six to paddle, one in the stern to steer, and one in the bow to throw the harpoon (Taylor, 1974). The Nitinaht canoe is of the "Nootka" type, described by Olson (1927). It is pointed at both ends; the bow projects upwards and forwards, and, except on small canoes, it is a separate piece. The stern is vertical and raised about the level of the gunwhales, the upper portion in all larger vessels being a separate piece of wood. The cross section is angular, and the bottom almost flat (see also Arima, 1975; 1975-76; 1982).

At least one Nitinaht dugout is still being used, although it is modified to accommodate a motor in the stern, and the gunwhales are built up. It is owned by Mike Thompson (son of late Mary Thompson), who lives along the northwestern shore of Nitinat Lake. Almost every day, at least during the summer, he takes it through the treacherous Nitinat Narrows to fish along the coast. This craft, combined with Thompson's skill in handling her, seems far more seaworthy than many of the more modern vessels attempting to pass through the Narrows. During our field trip to Whyac and Clo-oose, he was able to rescue, from turbulent waters at the mouth of the Narrows, the occupants of two modern canoes which had capsized in the waves. To us, it seemed somehow fitting, that this rescue should be made with a Nitinaht dugout.

The wood of western red cedar was used for many other items, including houseposts and houseboards for walls and roofing, and the slats or poles used in fish weirs. JT's paternal grandfather, Tom Klishil (from whom JT inherited the name, **ƛi·ƛal**), had a sockeye salmon weir of cedar slats. This weir, located along the Cheewhat River, near the entrance to Cheewhat Lake (see Figure 37, p. 43), was maintained by Klishil for many years (until about 1940), and by his father before him. The cedar slats were several metres long and about 5 cm wide. They were stuck in the mud side by side and protruded from the water about 2 m. As JT recalls, they were lashed together at the top with

Fig. 49 John Thomas carving practice arrow of red cedar wood. (Nancy J. Turner)

spruce root. The weir was in two sections, as can be seen in the illustration (Figure 36, p. 42). Klishil used to stand in his dugout next to the narrow "V" at the end and gaff as many sockeye as he could use. When he had enough, he would remove this "V" part to allow the fish to proceed upstream. JT remembered this weir, called **buša?**, as a young man, and recalled that the tops of the cedar slats would be covered with scales where the fish had jumped over them. Arima (1975-76) elaborates on JT's description of a Cheewhat River salmon weir, based on Chief Charlie Jones' recollections: Yew stakes, up to 10 cm in diameter, were driven into the river bed at approximately 0.6 m intervals. The height of the fencing had to be 2.4 m (8 ft.) above the water surface, measured when the river was in freshet. Three or four horizontals of vine maple were tied to the stakes with a rope of twisted cedar withes. Then vertical poles of cedar about 5–8 cm (2-3 in.) thick were set close to form the fencing. The shape and dimensions of the weir, as described by Arima (1975-76) and shown in a diagram (his Figure 1) are somewhat different from those described here. However, as Arima notes, the size of the enclosed volume within the weir depended on the number of fish desired: "If the enclosed space was too large so that too many salmon entered, something was bound to give under the pressure." The weir Arima describes was constructed to hold 400–500 sockeye. In addition, conical cage-like traps, each with a capacity for 200 salmon, were placed at either side of the main weir. Similar weirs were constructed on other rivers for coho, dog salmon, and steelhead, as well as sockeye.

Storage and cooking boxes, called **ʔaʔɬi-qs** (lit. 'flat-sided vessel') and **ʔu·ba·ɬs** (lit. 'warm/hot vessel') respectively, were also made from the wood of red cedar. The sides of each box were made from a single cedar board kerfed, steamed, and bend at three corners and sewn or pegged together at the fourth. The bottom was carefully fitted to make the container watertight, and a lid was fitted over the top (JT).

Red cedar was also used to make arrow shafts (see Figure 49), gaff sticks, and the salmon-spreading sticks to prevent the fish from curling up as it was being dried (JT). Long cedar poles were used for herring rakes (Arima, 1982).

The withes, or young limbs, of the red cedar were important as a rope material, for constructing the frames of certain types of baskets and for basket traps for fish. As JT recalls, for ropes, they were twisted, while still on the tree, until they had broken up into many longitudinal strands. At this point,

the bark was easily removed and the branch was untwisted and the strands cut from the trunk. These were then rolled on the thigh, either in pairs, if a thin rope were required, or several together, for a thicker, stronger rope. New strands were spliced in as required, being twisted together with the ends of the previous strands. This spinning process was done on the bare thigh and the skin on one's leg required constant lubrication to keep it from chafing. The original lubricant used was mussel-shell "filing" dust (a by-product from the manufacture of chisels and harpoon heads of mussel shell). When flour was first introduced by European traders, it was also used as a lubricant, as was talcum powder (JT). Arima (1975) describes cedar withe rope manufacture in detail. He notes (1975-76) that this rope, from which the bark had been stripped, was used to lash together the vine maple horizontals and yew stakes comprising the framework of salmon weir fencing.

Cedar withe ropes were used for various purposes, such as tying planks onto house frames, and tying the thwarts of a canoe in place (JT). Very thick, long ropes, made from twisting strands of three or four withes, were used as whaling lines. Attached to the whaling harpoon was a line about 8 m long (4 fathoms) made of whale-back sinew. This portion is nylon-like in quality, being exceptionally springy and flexible. The cedar withe rope is attached to it by a rather ingenious method. The ends of both sinew and cedar withe ropes are looped, the loops are placed together, overlapping, and a pin of yew is inserted through the loops. This pin is tied onto one of the ropes so it will not be lost. As long as there is some tension on the ropes, the sections will not come apart, but as soon as the

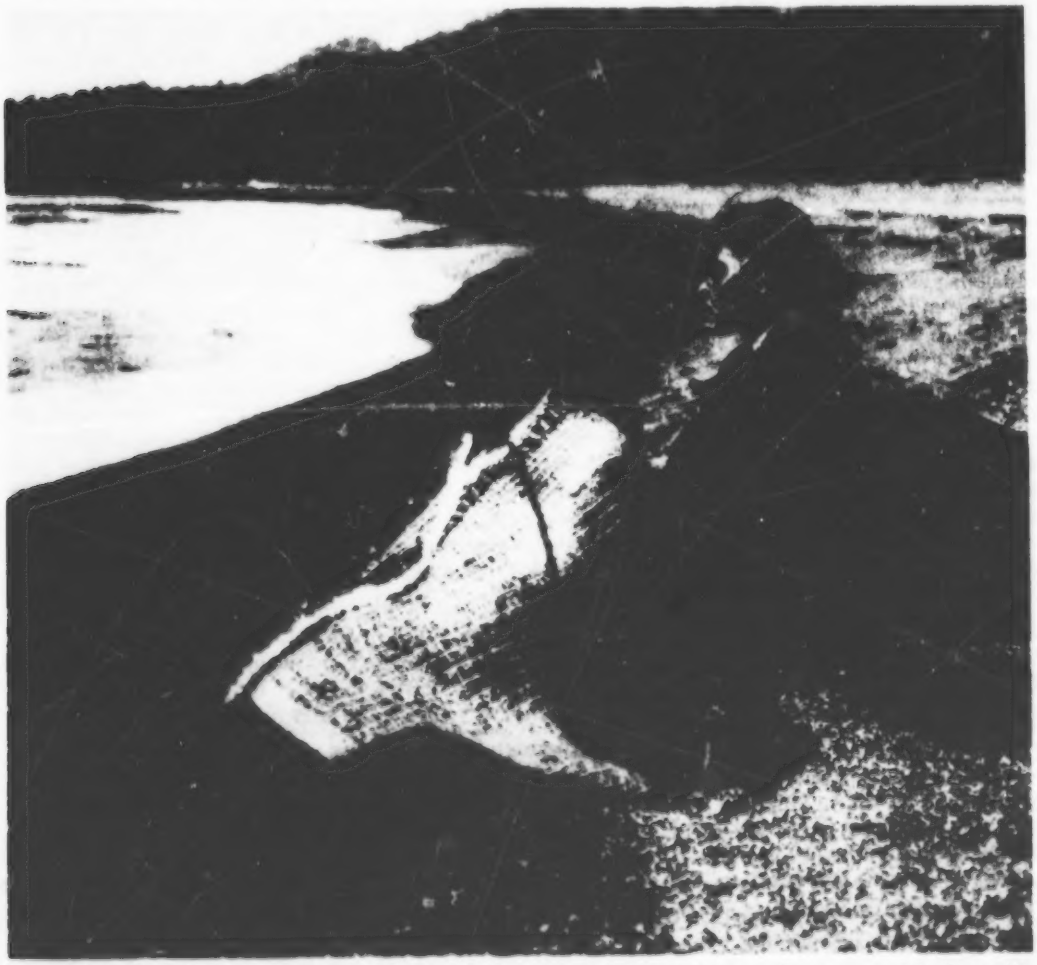

Fig. 50 Two Nootkan women model Nitinaht and Nootka style clothing and carry qa·ʔawe type pack baskets, with framework of split withes of red cedar, twined with split spruce root. On the ground are purse-like ɬa·ʔa·ɬ baskets of red cedar bark. (Photo by E. S. Curtis, ca. 1915. PABC)

lines slacken, the pin will slip out and the ropes will come apart. Thus, should it become necessary the whalers would be able to detach the harpoon from their canoe, without losing all of their line (JT).

Cedar withes, peeling and split in half, were used for the "ribs" for some types of baskets, namely the heavier burden baskets, or pack baskets (called **buxu·ɣ̓** and **qaʔawc**—see discussion on baskets, p. 24; see Figures 18, 50). These openwork baskets were twined with spruce root. Arima (1982) notes that "kelpfish" were caught with globular traps woven of cedar withes, each with a round entrance. For use, these were soaked and the narrowed neck pushed inward.

Cedar bark was another highly important resource. It was used for making many types of clothing (see Figure 50), as well as mats, some kinds of rope, adornments for masks, and a number of kinds of baskets. The harvesting of this valuable product is described by Thomas and Hess (1978), and the following information was obtained from this source and from JT directly. Cedar bark was harvested in May, when the sap is running. A tree yielding bark should be no more than 0.6 m (2 ft.) in diameter and should be devoid of branches for at least 5 m (15 ft.) up from the ground. Bark from an older, larger tree would be too thick and coarse.

To harvest the bark, a notch is cut near the base of the tree about 25 cm (10 in.) wide. Then the bark, called **ċaqabs** (the general term for any bark), is pulled from the tree. As it is pulled, it peels off upwards in a strip about 3 to 4 m (10 to 15 ft.) long and 25 cm (10 in.) wide at the bottom tapering to a point at the top. The average width is about 15 cm (6 in.). The inner bark, **piċip**, must then be separated from the outer bark immediately for, once it dries, it is not possible to separate the layers.

After being separated, the **piċip** is folded or rolled into a bundle about 60 cm (2 ft.) long for carrying home. There it is spread to dry. The drying takes about a day, if the weather is warm. The dried inner bark was usually stored until winter when food gathering activities were completed and there was time for making things. Before the **piċip** is used, it must be soaked to make it pliable again (Thomas and Hess, 1978; JT).

For ropes and twine, the inner bark was split into thin strips and spun on the leg usually into 2-ply lengths. Sometimes the bast fibre from the cottonwood tree was spun together with the bark of red cedar, as with yellow cedar (see *Chamaecyparis*). Sometimes, especially for clothing, the bark was beaten before being woven to make it softer. Fine waterproof hats and sometimes capes were made from red cedar bark, (see Figure 23, p. 28) although the latter were often of yellow cedar bark. The larger types of storage baskets, called **ƛ̓apa·t**, **ɬaʔa·š**, and **ƛ̓ituqʷsc**, were made from thick, relatively wide (2.5 cm) strips of the inner bark of red cedar, woven in checkerboard fashion (see discussion on baskets, p. 24). Additionally, the bottoms, rims, and ribs of some other types of baskets were made from the inner bark of red cedar (JT). A purse-like case for storing the head of a whale harpoon was made from a single flat sheet of the bark about 10 to 15 cm (4 to 6 in.) wide and about 45 to 60 cm (18 to 24 in.) long. It had fringes at both ends that were used to tie the case together. It was called **ba·kidkʷš** (JT). Blankets, called **qʷa·čid**, were woven from the inner bark of red cedar (or sometimes, that of yellow cedar) spun together with dog hair and cottonwood bast fibre (JT). A detailed description of preparation of red cedar bark is given by Arima (1982).

The green boughs of red cedar were sometimes used by the Nitinaht to catch herring spawn. However, JT notes that the herring hardly ever spawned in the Nitinat area; usually the people went north to Barkley Sound to get the spawn. Only once in JT's memory did the herring spawn in Nitinat Lake and then, because there were no large kelps for the herring to spawn on, the people put large quantities of cedar and hemlock boughs into the water to catch the spawn.

Red cedar was apparently little used medicinally. It was felt that water with red cedar growing nearby would make one sick if he drank it (see *Equisetum telmateia*—giant horsetail). The boughs were used as scrubbers in one of the stages of training for manhood. A young boy started this training by scrubbing his skin with soft materials, such as willow roots (*Salix* spp.), and gradually used tougher and harder materials until his skin was fully hardened. Red cedar boughs were used after willow roots, yew branches, and hemlock branches, by the time a boy was about ten years old (JT).

The Nitinaht term, **ɣubis**, for red cedar wood is related to the Hesquiat and Manhousat Nootka word **ɬumi·s**, which pertains to the tree when standing (Turner and Efrat, 1982; Ellis and Turner, 1976). The Nitinaht term for the inner bark, **piċip**, is related to both the Makah term ("**pi'ts·ōp**"—Gunther, 1973), and the Hesquiat and Manhousat Nootka term, **piċup**—(Turner and Efrat, 1982; Ellis and Turner, 1976).

PINACEAE (PINE FAMILY)

Abies grandis (Dougl. ex D. Don) Lindl. (Grand Fir), and *A. amabilis* (Dougl. ex Loud.) J. Forbes (Amabilis Fir, or Pacific Silver Fir)

čabsapt (lit. 'sweet plant', pertaining to pitch) (JT, IJ)

The Nitinaht apparently did not distinguish between these two species; both JT and IJ felt that there was only one kind of **čabsapt**, although both are known to occur in the Nitinaht area. The sweet, hardened pitch was chewed for pleasure (JT). The long, hard knots, like those of Douglas-fir and western hemlock, could be used to make halibut hooks (see *Tsuga heterophylla*) (JT).

The boughs were valued for their fragrance. They were gathered and brought into the house to give a nice scent to the room, as an air freshener. They were bundled up and hung on the wall, or were placed in the fire to make a purifying smoke, or incense, particularly if there was illness present. It was believed that if a person breathed the smoke, he would not get sick (JT).

The bark was crushed together with that of red alder *(Alnus rubra)* and hemlock *(Tsuga heterophylla)* and an infusion of the mixture was drunk as a medicine for internal injuries (see *Alnus*). There were no specific names for these barks; one simply used the general name for "bark" and mentioned the name of the tree with it (JT).

The name **čabsapt** is not related to the Hesquiat and Manhousat Nootka name for *Abies*, **ẇiḥmapt** (Turner and Efrat, 1982; Ellis and Turner, 1976). The Makah name is not given by Gunther (1973) or Densmore (1939).

Picea sitchensis (Bong.) Carr. (Sitka Spruce)

tu·χupt (lit. 'scaring plant'; cf. **tu·χʷšiƛ** 'startled, as by a sudden noise', and Nootka, **tu·ḥukʷ** 'being scared, afraid') (JT, IJ, CJ)

Cerantes Rock, off San Juan Point, is called "**socha:bl**," meaning "bunch of spruce growing on top of the island," according to Arima (1975-76).

The Makah ate young spruce shoots raw (Gunther, 1973), but the Nitinaht apparently did not. Spruce was an important species in Nitinaht technology. The wood was considered too light to be used as a material for most implements. However, it was used to make the longer (upper) prong in the 2-pronged salmon harpoon. The shaft of this spear was of Douglas-fir (see *Pseudotsuga menziesii*), and the shorter (lower) prong was of yew, which was much heavier than the spruce prong. This combination of woods gave the spear a good balance, so that it could be directed and thrown accurately (JT). Spruce knots were considered useless as material for halibut hooks; they were said to straighten out after they were molded, unlike hooks made from grand fir, Douglas-fir, or western hemlock, which would keep their shape better (JT; Arima, 1975-76). According to Swan (1870), spruce was not used by the Makah for halibut hooks because it has too much pitch and fish will not bite at a hook that smells of resin.

Spruce roots were used as the twining material for the sturdy pack-baskets called **qaʔawc**, the ribs of which were made of red cedar withes. They were also used for twining the smaller, oblong **buxu·ẏ̓** baskets. Additionally, JT thought that they were used for the Coast Salish **ƛ̓aʕašabɬ** (lit. 'wrapped spherical/chunky object') baskets, which were obtained by the Nitinaht through trade (see discussion on baskets, p. 24). However, more likely, these were of coiled cedar root (A. Laforet, pers. comm.). For use in basketry, spruce roots were dug in spring and early summer. The bark was scraped off with a knife or something sharp; it slips off quite easily. The roots, some of them up to 2.5 cm (1 in.) thick, were soaked, then split in quarters. JT recalled that the outer layer of the root is light coloured and the inner core is darker. Each quarter was split into its outer and inner portions, and these might be split again if the root was a large one. The rounded, light-coloured, outer strands were used for the main part of the weaving, whereas the darker centre strands were used to make designs in the weave because of their contrasting colour (Figure 51). The smaller the basket and, therefore, the smaller the weave, the more finely split would be the strands of spruce root (JT). Gunther (1973) recorded that the Makah wove hats from spruce root but JT had never heard of the Nitinaht making such hats. Spruce roots were, however, also used for binding joints of implements such as gaffs (JT).

Spruce pitch, as well as that of the pines, was valued as a protective coating for fishing spears and the heads of whaling harpoons. Spruce is said to yield more pitch than the pines. To collect the pitch, a cut was made through the bark and into the wood of a mature tree. By the next day, there

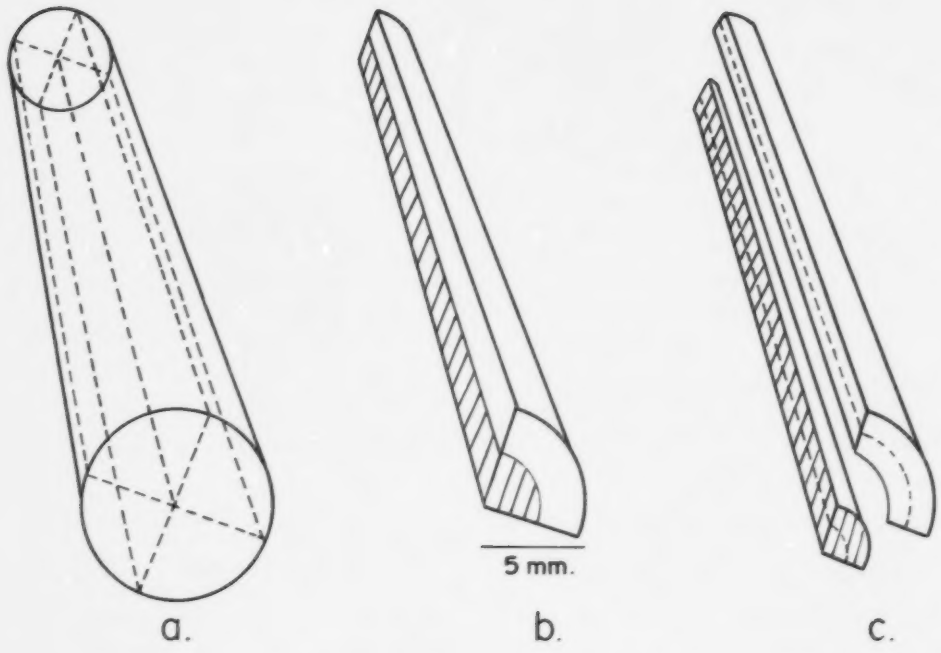

Fig. 51 Cross section of Sitka spruce root showing how it was split for basket making: a—root split in quarters lengthwise; b—white outer wood (split off) used for main weave in baskets, brownish inner core (shown hatched) used for decorations in baskets; c—for smaller baskets, root lengths could be further split as shown. (Drawing by Elizabeth J. Stephen)

would be a mass of pitch accumulated at the site of the wound. This was melted, in the case of spruce, by setting a fire to the pitch and catching the drippings with a large mussel shell. Pine, having less pitch, was not burned in this way (JT). The pitch was then allowed to harden. Later, it was softened, by chewing, and then smeared over the surface of harpoon heads, spear and harpoon shafts, and other implements, especially those that would come in contact with water. According to Gunther (1973), the Makah chewed spruce pitch for pleasure but the Nitinaht apparently chewed it only to soften it for use, although they did chew "balsam" (*Abies* sp.) pitch for pleasure (JT). However, JT recalled that entire families used to go out to gather and chew pitch, and that the process was undoubtedly pleasant and sociable. Pitch was inserted into the holes of newly pierced ears of a girl, until the lobes healed (Thomas and Hess, 1978).

Spruce boughs were considered too sharp to be used as scrubbers in manhood training (see *Thuja plicata*—western red cedar) (JT), although the Makah used them to rub the body while bathing (Gunther, 1973). However, during the dances in winter, some of the dancers would use the branches to "scare" those watching the dance. They would wave the branches at the spectators' faces, and if the watchers did not notice or failed to act scared, the dancers would hit them with the branches, ". . . and then you'll notice . . . You're supposed to be scared or you'll be made to be scared" (JT). The Nitinaht name for spruce is said to be derived from this practice of scaring people with the boughs (JT). The Hesquiat Nootka name, **tu·ƛmapt** (Turner and Efrat, 1982) is related, but the Manhousat name given for spruce by Ellis and Turner (1976), "**ch'uƛsmapt**", is not. The boughs were used as part of the traditional costume for Nitinaht initiation ceremonies (JT). Makah whalers sometimes placed a spruce sprig in their hairknots as a charm (Gunther, 1973). The Makah also used a decoction of spruce as a strengthening bath and took it internally "to clear the blood" (Densmore, 1939).

Fig. 52 Shore, or lodgepole, pine (*Pinus contorta* var. *contorta*). (Nancy J. Turner)

Pinus contorta D. Dougl. ex Loud. var. *contorta* (Shore Pine, or Lodgepole Pine), and *P. monticola* D. Dougl. ex D. Don (White Pine) (Figure 52)

ʔišipt (JT, IJ, CJ, LJ)

Specimens of both species of pine were shown to JT and LJ, and both can be found growing in the Whyac and Clo-oose areas. White pine grows in an extensive stand behind the large sand dune south of Clo-oose and both species grow in the bog around Whyac Lake. Nevertheless, although they were recognized as being different, they were called by the same name, as far as JT and LJ knew.

Pine has been used by carvers within the last century or so for making small totem poles, model canoes, and other small items, because it is soft and light. JT felt that it was quite difficult to get (JT). Pine pitch, like that of Sitka spruce (see *Picea sitchensis*), was valued as a protective coating for whaling and fishing gear—spears, harpoons and other implements (JT). It was harvested and used in the same way as spruce pitch, but was not as plentiful. Nor was it burned to gather it, but collected directly from the wound in the trunk (JT). Sometimes the pitch was mixed with melted deer tallow to make a type of skin cosmetic (see also *Populus balsamifera* ssp. *trichocarpa*—black cottonwood) (JT).

In the Hesquiat and Manhousat Nootka dialects, separate names are applied to these two pine species (cf. Hesquiat and Manhousat—**ʔaakmapt** for *P. contorta*, and Hesquiat **ʔiʔaksmapt** and Manhousat "**ʔich'aakmapt**" 'needle plant' for *P. monticola*) (Turner and Efrat, 1982; Ellis and Turner, 1976), and neither is related to the Nitinaht name for the pines. Neither Gunther (1973) nor Densmore (1939) gives the Makah name for pine species.

Pseudotsuga menziesii (Mirb.) Franco var. *menziesii* (Douglas-Fir)

sabaχtqapt (JT, IJ, CJ)

Douglas-fir bark was considered to be a good fuel; the wood was also used as fuel (JT). The hard knots from rotten Douglas-fir logs could be used to make molded halibut hooks (see *Tsuga*

heterophylla—western hemlock). The wood was commonly used by the Nitinaht to make spear shafts, particularly for the 2-pronged salmon spear (see Figure 34, p. 40), and for the seal spear, which was similar, but longer and more flexible so that it would move better through the waves. The longer (upper) prong of these spears was of Sitka spruce (*Picea sitchensis*) and the shorter (lower) one of yew (*Taxus brevifolia*), which was heavier. The combination of woods made the spears better balanced for accurate throwing (see discussion of implements, p. 41). The shafts of sea urchin spears were also of Douglas-fir as were poles for placing codfish lures (see *Oplopanax horridus*—devil's-club) (JT). To make the spear shafts and poles, large slabs would be cut from a Douglas-fir log. From these, pieces were split off lengthwise and carved to the proper shape and thickness (JT).

The Nitinaht name for Douglas-fir is not related to the Nootka names [cf. Hesquiat—**ma·wi**, or **ma·wiqsmapt**) (Turner and Efrat, 1982), and Manhousat "**maawi**" for the mature tree (Ellis and Turner, 1976)]. The Makah name is not known to us.

Tsuga heterophylla (Raf.) Sarg. (Western Hemlock) (Figure 53)

tree: **q̓ʷiƛ̓qapt** (lit. 'fire-goes-out tree'; cf. Makah **q̓ʷiƛ̓aqak** 'fire has gone out') (JT, IJ, CJ)
hemlock-bark dye: **c̓i·tɬʔbit** (also the colours—various shades of brown—produced by the dye) (JT)

If one is lost in the woods, he can chew the young, light green tips of hemlock branches to keep from feeling too hungry (JT). Hemlock boughs were used by the Nitinaht, and by the Nootka and other Northwest Coast peoples (Turner, 1979), to catch herring spawn. However, the Nitinaht almost always had to travel to Barkley Sound to obtain herring spawn because the fish seldom spawned in the Nitinaht area. Only once in JT's memory did they spawn at Nitinat Lake (see also *Thuja plicata*—western red cedar). The herring spawn in spring, usually in March. Hemlock boughs with herring spawn on them were simply pulled out of the water, broken up and tied in small bundles, hung to dry, then stored for later use. Then, when the spawn was to be eaten, the boughs were soaked in water and the spawn fell off the needles, but JT recalled that even if the needles were not all separated out, they could be eaten along with the spawn (JT). Arima (1982) notes that West Coast herring spawning fences for herring were of large branches or saplings of hemlock or spruce [?] set out underwater where it was 5 m (15 ft.) or so deep at low tide.

Fig. 53 Western hemlock *(Tsuga heterophylla)*. (Robert D. Turner)

Hemlock wood was little used traditionally. Because "it is a heavy kind of wood and it's usually wet," it was not considered a good fuel, especially when green. However, later, when stoves and fireplaces were acquired, it was used to bank up the fire overnight, because it is slow burning (JT). Arima (1975-76) states that the wood from hemlock saplings could be used in place of yew for the spreader in the two-hooked halibut fishing apparatus.

The hard, dense knots from rotten hemlock logs, or even those that had washed up on the beach or along a river, were used to make molded halibut hooks, called **čibuʔd** (see Figures 26–28, pp. 26 and 34). Knots of grand fir and Douglas-fir could also be used, but not spruce because they were said not to hold their shape (JT; Arima, 1975-76). The manufacture of halibut hooks is described on p. 31. The hooks could be used singly or in pairs, and were baited with a variety of types of flesh, particularly octopus, herring or tommycod (JT). They could also be used to catch other types of fish (Arima, 1982). Halibut fishing techniques are described in detail by Arima (1975-76; 1982).

Hemlock bark yields a variety of brown dyes, ranging from light brown to virtually black, depending on the position on the trunk from which the bark is harvested. For a light brown dye, the bark is harvested from about the 2 m (6 ft.) level. The colour obtained becomes progressively darker the further down the trunk one goes; for black, the bark is taken at ground level, between the root buttresses (JT).

To make the dye, the bark was chopped into small pieces and pounded and crushed on a rock with a stone hammer. It was then steeped in hot water and the article to be dyed was soaked in the resulting solution. The dye was used on cedar bark, basket "grass" (see *Carex obnupta*), and on fishing nets and lines (made of spun fibre from stinging nettle and cottonwood—see *Urtica dioica* and *Populus balsamifera* ssp. *trichocarpa*). Nets and lines were coloured brown so they would not be easily noticed by fish. Since hemlock bark is rich in tannins (Hosie, 1969), the dye undoubtedly functioned as a preservative as well as a colouring substance. In fact, Densmore (1939) notes that a "red" dye prepared by boiling pounded hemlock bark in water was applied by the Makah to spears and similar articles and "seemed to preserve the wood." Paddles coloured by this dye were sometimes treated by baking over a fire (Densmore, 1939). As mentioned earlier, hemlock dye, and the entire range of brown colours it yields, is called **čiʔtiʔbit** in Nitinaht.

Hemlock bark, mixed with that of grand fir *(Abies grandis)* and red alder *(Alnus rubra)*, was infused in hot water, and the solution, after being allowed to cool, was drunk to replace other beverages over a period of time to heal the body after injuries, such as bruises, broken bones, or internal injuries (see *Alnus rubra* for more details). The Makah drank a hot decoction of hemlock bark for internal injury (Densmore, 1939). They also mixed the powdered bark with oil and applied it to the hair to eliminate lice, and, for an obstinate sore, they applied a poultice from the bark formed over a wounded part of the tree, moistened and rubbed on a rock (Densmore, 1939). The Makah used hemlock pitch as a sunburn preventative and rubbed it on the hair to remove lice. They also applied the chewed bark to a wound to stop bleeding and mixed the dried, powdered bark from the roots with saliva and rubbed this mixture on the face, possibly to prevent sunburn (Gunther, 1973).

In the manhood training of a Nitinaht boy, bundles of hemlock boughs were used as scrubbers to help toughen the skin. They were considered quite soft and were considered to be the least difficult scrubbers, after willow roots (see *Salix* spp.) (JT).

Despite the apparent derivation of the Nitinaht name for hemlock from the Makah word **qʷiƛ̓aqak** (lit. 'fire has gone out')*, the Makah name for western hemlock is apparently not related (cf. "**kiak!a'bupt**"—Gunther, 1973, or "**tkaka'bup**"—Densmore, 1939). The Nootka name, on the other hand, is related to Nitinaht (cf. Hesquiat and Manhousat—**qʷiƛ̓aqmapt**) (Turner and Efrat, 1982; Ellis and Turner, 1976).

Taxaceae (Yew Family)

Taxus brevifolia Nutt. (Western Yew) (Figure 54)

ƛ̓atapt (lit. 'plant for making wedges'; cf. **ƛ̓aƛ̓ak** 'wedge', **ƛ̓a-** 'anything sharp that parts something', and **ƛ̓a-cƛ̓a-y** 'splitting, using something sharp for separating') (JT, IJ, CJ)

Like all other groups on the Northwest Coast, the Nitinaht valued yew for its strength and resiliency. As CJ said, "That's the hardest tree we got." Yew was used to make many types of implements (see Figures 55 and 56), particularly those that would be subjected to great stress such as digging sticks, prying sticks, bows, mat-making needles, mat-pressers, wedges (Figure 35, p. 42),

* The corresponding Nitinaht term for 'fire gone out' is **wiƛ̓aqk** (JT).

Fig. 54 Western yew *(Taxus brevifolia)*. (Nancy J. Turner)

clubs, steering paddles, lances and whaling harpoon shafts. It was also used for some of the smaller pieces of fishing and whaling gear, such as the pin (called **qaqχaɬib**; cf. **qa-** 'being stuck with something sharp, such as a rose thorn') used for joining the sinew and cedar-withe whaling ropes together (see under *Thuja plicata*—western red cedar), and the short "gaff" part of a gaff-hook (see discussion on implements) (JT).

The Nitinaht digging stick was straight, pointed at the lower end, and with a small nob at the top. It was about 1.3 m (4 ft.) long (see Figure 15, p. 17). A prying stick, used for chitons and gooseneck barnacles, was similar, but with a chisel-shaped end (JT). The bow was flattened, tapering at each end and narrowed at the centre to allow a better grip (see Figure 19, p. 27). The inner surface was slightly concave. The ends were notched about 1 cm from the tips, and the bowstring, made originally of sinew, was tied permanently at one end, and looped at the other so that the loop could be slipped through the bow and pulled up and held in the notch at the other end to string the bow. The bow was kept unstrung except when actually in use (JT). Bows are also made from vine maple *(Acer circinatum)*.

The whaling harpoon shaft was the largest item made from yew. Up to 5 or more metres (15 or more feet) long, it was constructed of two pieces of yew, joined at the centre by a diagonal splice (see Figure 25, p. 32), which was wrapped with the bitter cherry bark *(Prunus emarginata)*.

Yew was used to make the shorter (lower) prong of the 2-pronged, harpoon spears for salmon and seals (JT—see also *Picea sitchensis*—Sitka spruce, and *Pseudotsuga menziesii* var. *menziesii*—Douglas-fir). Arima (1982) reports that the Nitinaht constructed elk pits, having a sharpened stake of yew set at the bottom. Yew was also used to make a special ball-ended halibut club, spreaders for the halibut fishing apparatus (hemlock could also be used), and support stakes for salmon weir fencing. For the last purpose, the stakes, some 10 cm in diameter, were set at approximately 0.6 m intervals, and were driven into the river bed with a natural stone pile driver until they were firm (Arima, 1975-76). Arima notes that yew was preferred for its longevity although it is not the most commonly available wood. Horizontals of vine maple were tied to the uprights with cedar withe rope, and cedar poles were set close together to form the fencing. Recently, yew has been used in making oarlock holders (JT).

Gunther (1973) noted that the Makah used yew for whaling harpoon shafts, bows and arrows, and canoe paddles, and that they favoured it when carving spoons and dishes as well. She also reported they made trinket boxes of yew which were square, burnt out of one piece, and had lids. It is not known whether the Nitinaht made spoons, dishes, or boxes from yew.

Fig. 55 John Thomas, with sections of yew for making bows and digging sticks, with modern tools he uses for carving. (Nancy J. Turner)

Fig. 56 John Thomas commences to work on a digging stick of yew (see Fig. 15). (Nancy J. Turner)

JT recalled that most of the yew used by the people in the Whyac and Clo-oose area was harvested from a large stand, over an acre in extent, located behind the site of his grandfather Tom Klishil's cabin on the north side of the Cheewhat River near the entrance to Cheewhat Lake (see map, Figure 1, p. x). The stand was virtually entirely made up of yew trees, and the individual trees, though not large (most averaged only 5 to 18 cm, or 2 to 6 in., in diameter), were tall and straight, an unusual feature for yew, which is often bent and gnarled. Originally, the trees were cut and carved by hand, with chisels made from large California mussel shells. The mussels used for these chisels were obtained from the flat rock just off the point north of Clo-oose Bay. They grew up to 25 cm (10 in.) long there. Their natural shape was retained, but they were sharpened around the wider end until razor sharp, and any rough spots were ground off. The sharpening of mussel-shell chisels, and some of the carving of wood in which these chisels were used, was done on the flat sandstone beach between Clo-oose and Whyac where there are petroglyphs located (JT). After being sharpened and smoothed, the mussel chisels were thoroughly rubbed with oil—usually of dogfish—and this oiling process was carried out over a period of two or more years to allow the oil to penetrate through the entire shell. The shells, like the bull kelp lines, which were subjected to a similar oiling process, were stored on the house roof (JT).

Yew branches, with needles attached, were used as scrubbers during manhood training. They were considered "harder" than willow roots and hemlock boughs, but "easier" than red cedar boughs (JT—see also *Salix* spp., *Tsuga heterophylla*, and *Thuja plicata*).

The Nitinaht name for yew is related to the Nootka [cf. Hesquiat and Manhousat—ƛatmapɬ (Turner and Efrat, 1982; Ellis and Turner, 1976)], but apparently not to the Makah, which Gunther (1973) gives as "**k'lenedakxɬebapt**".

ANGIOSPERMS (Flowering Plants—Monocotyledons)

ARACEAE (ARUM FAMILY)

Lysichiton americanum Hult. & St. John (Skunk-cabbage, or Yellow Arum)

tibu·t (cf. Nitinaht and Makah **tl·ƛti·y** 'to wipe, as with a dish towel') (JT, LJ, CJ)

The large, waxy-coated leaves were used as plates, for laying food on at a barbecue. They were also used for wrapping leftover food, such as fish or berries, to keep it fresh. They could be made into a cup, by folding them in half and pulling the edges back to the stem. The resulting container could be used for drinking, or as a makeshift berry container. In drying salal and other types of berries, the leaves, after having their thick midribs trimmed off, were laid side by side and the mashed fruits spread overtop. When the berries were completely dry, the skunk-cabbage leaves could be peeled off and discarded (JT, LJ). JT had never heard of the leaves being used in a steam-cooking pit to place immediately under or over the food and felt that the strong flavour and odour of the leaves might taint the food. However, he thought they might have been used at the very top of the pit, to help contain the steam.

For a severe burn, a whole leaf was placed, underside down, over the burn as a poultice. JT explained, "The top part is smooth—there's nothing on there. The bottom part has got sort of [healing] stuff on it." The Hesquiat Nootka also used the leaves as a poultice for burns. They were changed frequently, always being kept cold and fresh (Turner and Efrat, 1982). Makah women chewed the root to bring about an abortion, and applied the warmed leaves to the chest for pain. A decoction of the root was drunk as a blood purifier (Gunther, 1973). Densmore (1939) recorded for the Makah that a little of the root was chewed after taking an emetic of red elderberry, and that it was hot, like pepper. The peppery qualities of skunk-cabbage leaves and rhizomes are due to the presence of needle-like crystals of calcium oxalate, which penetrate the tongue and gums. These are common in many members of Araceae (Kingsbury, 1964).

The Nitinaht name, **tibu·t**, is apparently the same as the Makah name (JT; cf. "**tibu't**"—Gunther, 1973, and "**tibiut**"—Densmore, 1939), and is related to the Nootka names [cf. Hesquiat and Manhousat—**tiɬa·t**, for the green leaf or whole plant, and Hesquiat **tiɬa·t**, for the inflorescence (Turner and Efrat, 1982; Ellis and Turner, 1976)]. JT feels that the Nitinaht name was borrowed from Makah (see suggested derivation noted earlier), but Densmore (1939) states that the Makah name has no meaning. As a matter of interest, the same etymon is found in some Interior Salish languages, including Shuswap and Spokane (T. Hess, pers. comm.).

CYPERACEAE (SEDGE FAMILY)

Carex obnupta L.H. Bailey (Tall Basket "Grass", or Sedge; Slough Sedge)

ƛ̓ilʔapat (JT, IJ, LJ)

Although Nitinaht people commonly refer to this as "basket grass", it is not considered to be in the category, **ʕaqapat**, which includes grasses in general (see discussion on Nitinaht plant classification, p. 47) (JT). *Carex obnupta* leaves are the most widely used material for wrapping and twining in the wrapped, twined, "grass" baskets, that are so well known and widely marketed by Nitinaht and Nootka women even today. These are called **puk̓ʷuʔ** (also **puk̓ʷʔuˑ**—Thomas and Hess, 1978). They are small, round baskets, ranging from less than 5 cm (2 in.) to over 15 cm (6 in.) in diameter (see Figure 57). The materials used for these baskets vary, but often the bottom and "ribs" are of "three-cornered grass" (*Scirpus americanus*), the wrapped portion of *C. obnupta*, and the top rim of the inner bark of red cedar. The baskets usually have tightly fitting, convex lids of the same weave, and usually both basket and lid have designs of whales, birds, canoes, or geometric patterns woven in with dyed strands of twining material (see discussion on baskets, p. 24).

Formerly, the **puk̓uʔ** baskets were used to hold cosmetics such as deer-fat tallow or a powder made of mussel-shell shavings (put on the body for protection against sunburn) (Thomas and Hess, 1978). However, nowadays, most Nitinaht women make their baskets for sale to tourists and other non-Nitinahts. A small **puk̓uʔ**, about 5 cm (2 in.) across, today sells for between $10 and $20.

Carex obnupta grows in swampy places, often in forested areas (see under *Carex lyngbyei*). Some swamps are known to yield better basket sedge leaves, that are longer and more pliable than from other areas. Clo-oose women used to get their **ƛ̓ilʔapat** from a long slough behind the large dune south of the Cheewhat River. Bernice Touchie (pers. comm.) recalled that as a girl she used to go with her grandmother (IJ) to the eastern side of Whyac Lake to get **ƛ̓ilʔapat**. There used to be a dugout canoe kept at the lake and the "grass" harvesters would use it to get across the lake. Even today there are patches of tall basket sedge in the shady woods around Whyac Lake.

The basket sedge leaves were cut in late summer (August). A knife was used to cut the plants at the base, as low to the ground as possible. The best plants were said to be those growing in 10 cm (4 in.) or so of water; they could be cut just below the surface of the water (JT). Only the non-flowering or fruiting vegetative plants were gathered. The flowering plants were called **čapx̓ʷapt**, or "male plant" (see also *Carex lyngbyei*). Their leaves were said to be thicker and more brittle and not suitable for weaving. A similar view was held by the Hesquiat Nootka basket makers (Turner and Efrat, 1982).

The harvested sedge leaves were bundled and taken home, where they were sorted according to size; the longest ones, considered the best, were put together and dried (JT, IJ) (see Figure 58). After the leaves have dried slightly, they are split exactly in half lengthwise, from bottom to top, using the thumbnail. [The thumbnail is called **ƛ̓aʔaƛ̓** (cf. **ƛ̓aʔiiX** 'to split') because it is used in this and other splitting processes.] After being split, the leaves are dried completely and bleached in the sun by being laid out on rocks, sand, or pieces of board. They can then be bundled and stored. Some are dyed, using commercial dyes of various colours including purple, green, and red (JT, IJ). Some women prefer to buy the dyed grasses from others. MT used to get her grasses from Makah weavers at Neah Bay. The dye used for basket materials was called **qiciiʔɬ** (JT).* Originally, natural dyes, such as yellow from Oregon-grape (*Mahonia* spp.) and red from red alder (*Alnus rubra*) (JT) were used.

JT noted that one had to use the same type of material for twining the entire basket, even the patterned part. For example, one should not mix basket sedge and bear-grass (*Xerophyllum tenax*) leaves, because the latter are more lustrous, and would show up as being different even if it were only used for the dyed part. However, commercial raphia (or, raffia) (see Appendix 4, p. 142) is often used nowadays for twining the first row on the bottom and the last row around the rim, since it is stronger and can be pulled tighter to hold the basket together (JT, IJ).

The Nitinaht believed that picking "grasses" for baskets and mats (such as *Carex obnupta* and *Scirpus lacustris*—tule) causes fog. The fishermen were always getting annoyed with the women who harvested these materials because they were always making it foggy (JT) (see also *Scirpus lacustris*).

* On another occasion, however, JT said this term applied to 'something already dyed.'

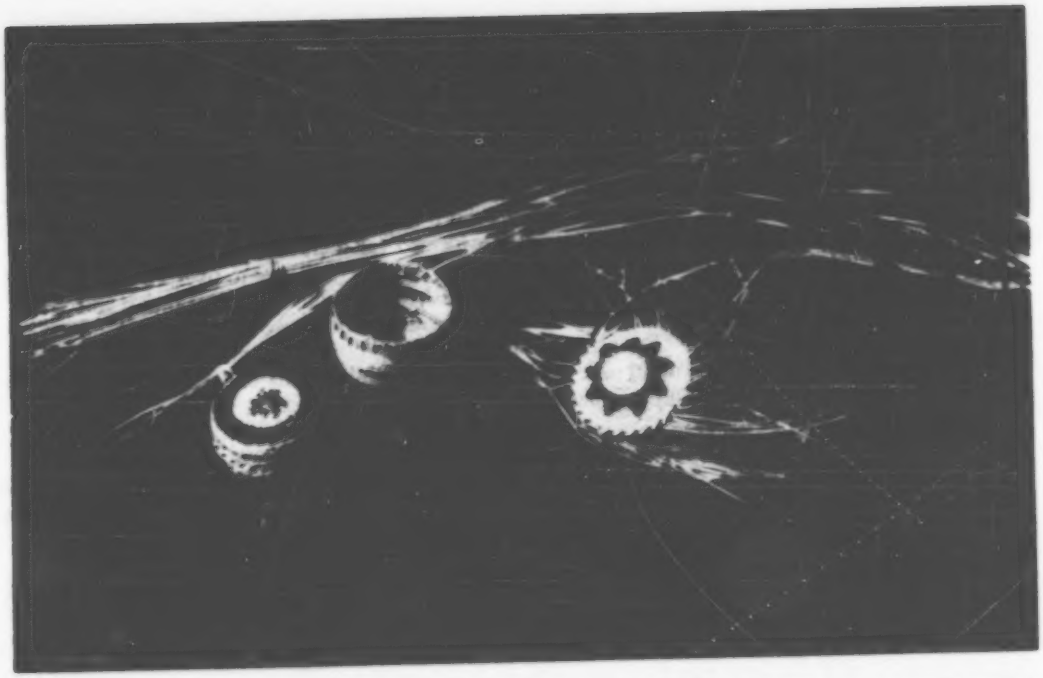

Fig. 57 Finished (left) and unfinished **puku?** baskets. The upper bundle of material is three-cornered "grass" *(Scirpus americanus)*, often used as the warp in these baskets. The lower bundle is of dyed (and undyed) strands of basket sedge *(Carex obnupta)*, the usual material for twining. (Robert D. Turner)

Fig. 58 Bundles of dried basket sedge leaves *(Carex obnupta)* ready for use in basketry. (Nancy J. Turner)

The Nitinaht name for *Carex obnupta* is related to the Nootka name [cf. Hesquiat and Manhousat ƛ̓itapt (Turner and Efrat, 1982; Ellis and Turner, 1976)]. The Makah name is not given by Densmore (1939), who simply mentions *Carex* sp., ". . . used for the bottoms of the baskets, being woven with cedar bark", nor by Gunther (1973), who states that *Carex* (*sitchensis*?) [sic] was used for the bottom of trinket baskets.

Carex lyngbyei Hornem. (Lyngbye's Sedge), and other *Carex* species

tutubuq̓ʷapt (lit. 'standing in the water plant'; cf. **tubuq̓ʷa** 'wading') (JT)

This tall sedge, of open saline marshes, was considered too coarse and brittle to use in basketry, although it looks similar to the previous species (JT). JT noted that whereas the "real" basket "grass" grows in wooded swamps, in fresh water, this species grows in open saline and estuarine swamps. None of the sedges growing in open habitats was believed to be usable for baskets. Sometimes they were called **čapx̓ʷapt**—the "male plant" of *Carex obnupta*, just as the flowering or fruiting specimens of *C. obnupta* itself were called (JT).

Scirpus acutus Muhl. ex Bigel. (Tule, Great Bulrush, or Round-stem Bulrush)

plant: **ƛ̓u-daʔxapt** (JT)
tule mat: **ƛ̓u-daʔx** (JT)

The tall, round, spongy stems of this plant were used by the Nitinaht to make mats, as they were by the Nootka, Makah, and virtually all Coast and Interior Salish groups (Turner and Efrat, 1982; Gunther, 1973; Turner, 1979). A large patch of the plants is found in the marshy area at the upper reaches of the Cheewhat River flood plain, alongside a patch of cat-tail (*Typha latifolia*) (see Figure 1). This patch was apparently the main source of the stems for the Nitinaht at Clo-oose and probably those at Whyac as well (JT). The stems were harvested in late summer, bundled carefully to prevent them from bending, then taken home and laid out in the sun to dry thoroughly. Once dried, the stems were bundled and stored until needed. For making mats, they were laid side by side, alternating upper and lower ends, and sewn through at intervals, with long, thin needles of yew and thread, traditionally of spun nettle fibre or the finely spun inner bark of cedar. JT recalled that his grandmother used strands of untwisted hemp rope for sewing the tule mats. While the needle was still inserted, a D-shaped mat-presser, also of yew, was used to keep the stems from splitting after they were sewn. The straight part of the "D" formed the handle, and on the rounded surface was a longitudinal groove, which was placed over where the needle was and pressed to make a smooth passageway for the needle and thread (JT). The mats could be made very long, simply by adding more tule stems, and could be rolled up and stored when not in use. They were used to line the walls of houses and for making sleeping compartments and partitions. When they were stacked, four or five together, they made good sleeping mattresses (JT). JT recalls sleeping on them as a boy and having the mats hung around the walls of the house as room-dividers and to keep out the draft.

As mentioned earlier, when tule or basket "grasses" were cut, it was believed to cause fog (JT). [According to Nitinaht traditional beliefs, Heron (**ʕe-ƛ̓is**) keeps the fog in a box, but if he opens it all the way, it becomes very foggy (Thomas and Hess, 1978). Apparently, the cutting of these "grasses" caused Heron to open his box.]

The Nitinaht name for tule, **ƛ̓u-daʔxapt**, is related to the Makah form, "**t!ɑ̓'dɑxbupt**" (Gunther, 1973), and also to the Nootka [cf. Hesquiat and Manhousat **ƛ̓uma-x** (Turner and Efrat, 1982; Ellis and Turner, 1976)].

Scirpus americanus Pers. (syn. *S. pungens* M. H. Vahl ssp. *pungens*)
(Three-cornered "Grass", or Three-square) (Figure 59)

ƛ̓iƛ̓i-tiyuɣ̓ʷaʔɬɬ (lit. 'edged along the length') (JT, LJ); *or* **ƛ̓uɣ̓ʷ-ƛ̓uɣ̓ʷ** (onomatopoeic—named after the sound it makes when pulled out—borr. fr. Nootka) (JT, LJ); *or* **ƛ̓uƛ̓uqaƛ̓kʷ** (lit. 'looks like tule—*S. acutus*') (MT).

The first name given is the preferred name. It is said to be the "real" Nitinaht name. The same word is also applied to a 2-by-4 timber (JT). The soft, spongy stems of this plant are triangular in cross section and were, and still are, commonly used for the bottom and "ribs" of the round, wrapped, twined "grass" baskets (see also *Carex obnupta*—tall basket sedge, the leaves of which were used for twining). *Scirpus americanus* is apparently highly specialized in habitat. LJ knew of

Fig. 59 Stems of three-cornered "grass" *(Scirpus americanus)* being dried in the sun. (Nancy J. Turner)

only one location for it—along the muddy shores and estuarine marshes of the Cheewhat River, about 0.6 km (1 mi.) from the mouth (see Figure 1). Although JT had not been up this river for over 40 years, he was able to locate the patch of three-cornered "grass" during our 1980 field trip to the area, and harvested several bundles and some living roots to take back to IJ. IJ has attempted to transplant the roots near her house at Port Renfrew, so far without success. JT's aunt used to harvest it near Bowser, on the east coast of Vancouver Island. JT also told us that a large patch grows along the northwestern shore of Nitinat Lake, in a large saline marsh.

This "grass" was harvested in August; when pulled, the stems simply break off at the base, making a sort of popping sound, imitated by the second name listed. They were carefully bundled so that they would not bend, then carried home and laid out on rocks, sand, or boards to dry thoroughly in the sun, a process that might take several days. They were covered or taken inside in rainy or foggy weather. Once dried, they were sorted according to length and bundled for storage. A **puku?** basket (see Figure 57, p. 80) is started by weaving these stems together in a checkerboard fashion, twining around this checkerboard with store-purchased raffia for one or two rows, then twining with split leaves of *Carex obnupta*, with the stems of the three-cornered "grass" forming the "ribs". The stems and sedge leaves are soaked before being woven, to make them flexible.

The related *S. maritimus L.* var. *paludosus* (A. Nels.) Kükenthal (or Kuekenthal) also grows in extensive patches in the marshes along the Cheewhat River flood plains. However, the stems, although similar, were considered too hard and brittle for making baskets and were called **čakup** (lit. 'male') (JT).

According to Densmore (1939), the Makah brought *S. americanus* from Vancouver Island and used it in making baskets. Likely, it was from the Nitinaht people that they obtained it, but the source locality was not given. Neither Densmore (1939) nor Gunther (1973) gives a Makah name for the plant. There is apparently no related form in Nootka for the first name listed but the second is related to that in the Alberni and Ucluelet Nootka dialects [cf. **ƛuƛux**] as given in Turner and Efrat (1982) for this species and *S. acutus*. JT felt that it was borrowed from the Bamfield dialect. The third name, **ƛuƛuqsaƛkʷ**, used by MT, is in the same etymon with one given for Hesquiat Nootka, **ƛuƛuuqsaƛuk** (Turner and Efrat, 1982).

Scirpus microcarpus K. B. Presl ("Cut-grass", or Small-flowered Bulrush)

bi·ʔbiƛ̓ʷapt (IJ)

IJ seemed slightly unsure about the identity of "**bi·ʔbiƛ̓ʷapt**". She first applied the name to this species but later stated that there was a narrow-leaved kind growing in the water and that *S. microcarpus* was a wide-leaved type that was not used for anything. On another occasion, she mentioned a narrow-leaved plant called "**di·ʔdiƛ̓ʷapt**", possibly *Phyllospadix torreyi* (see under Zosteraceae), that is apparently the same as the first narrow-leaved plant she mentioned. She used the dried, split leaves of this narrow-leaved form in her basketry.

LILIACEAE (LILY FAMILY)

Allium cernuum Roth (Nodding Wild Onion), and *A. cepa* L. (Garden Onion)

q̓iyaq̓iya· (borrowed from Makah*) (IJ)

Allium cernuum grows on the rocks along the shore near Whyac village. IJ recognized these plants but had never heard of the bulbs being eaten by the Nitinaht. However, she noted, ". . . when they see those onions in the stores now, when White man came, they start calling it that [the name **q̓iyaq̓iya·**, originally for wild onions] because it smells like that. Onions, big onions." Wild onions were apparently not eaten originally by at least some Nootka groups either for, when Captain James Cook and his men landed in Nootka Sound, they found "wild garlick" (*A. cernuum*) in abundance, but noted that the Indians there did not eat it. However, when the Native people found that the ships' crews sought these onions, they harvested them to sell to the crews (Turner, 1978). The Makah were said to eat wild onions sparingly, usually only when travelling alone (Gunther, 1973). The Nitinaht name for onions was apparently borrowed from Makah ("**klɨ̓"yɛ̓'klɨ̓'yebupt**"—Gunther, 1973) (see previous footnote), and is not linguistically related to the Nootka name [cf. Hesquiat and Manhousat **ʕɪsaq**, for garden onions, and Hesquiat **ʕɪʕɪsaqk̓uk** (lit. 'resembling garden onions') for *A. cernuum*] (Turner and Efrat, 1982; Ellis and Turner, 1976). (In Manhousat, *A. cernuum* is also called "**ʔɪsak̲**".)

Contemporary Hesquiat consultants did not recall whether wild onions were eaten before European contact. Luke Swan of Manhousat, however, believed that they were eaten originally, raw or cooked (Ellis and Turner, 1976).

Camassia leichtlinii (J. G. Baker) S. Wats. (Great Camas),
and *C. quamash* (Pursh) Green (Common Camas) (Figure 60)

kʷa·dis (IJ, CJ, JT)

These species do not grow in Nitinaht territory (JT; IJ; Taylor, 1966). However, the bulbs were a well known and favourite food of the Nitinaht, as they are among some of the Nootkan groups, such as Manhousat (Ellis and Turner, 1976), and Hesquiat (Turner and Efrat, 1982). The Nootka and Nitinaht traded for these bulbs from the Straits Salish of the Victoria area and from the Halkomelem Salish people on the east coast of the Island and in the Fraser Valley (IJ; JT; Fenn *et al.*, 1979). There is some suggestion that they may have been transplanted and grown in a few isolated locations in Nootka territory. Luke Swan of Manhousat stated that camas grows at the mouth of the Megin River, north of Ahousat (Ellis and Turner, 1976), and it was also known from the vicinity of Hesquiat village (Turner and Efrat, 1982)**. Gunther (1973) stated, as a general remark, that "except for choice varieties of dried salmon, there was no article of food that was more widely traded than camas."

IJ recalled that when she was young, the Nitinaht used to trade dried fish and other items for camas bulbs from the Salish people in Victoria. She said that some Nitinaht people used to dig the bulbs themselves from the islands in Oak Bay. They were usually dug in late summer, when the seed pods were still visible (IJ, JT). IJ tried planting some of the bulbs in her garden, but they soon become mixed up with hyancinth and other flower bulbs.

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* **q̓** is not usually found in Nitinaht, hence its occurrence suggests borrowing fr. Makah.

** However, isolated naturally occurring populations of *C. quamash* were found in 1981 growing in bogs on the Brooks Peninsula of northwestern Vancouver Island.

Fig. 60 Camas bulbs and seed stalks. Left—*Camassia leichtlinii*; right—*C. quamash*. (Nancy J. Turner)

Camas bulbs were formerly steam-cooked in underground pits (see also *Pteridium aquilinum*—bracken fern, *Potentilla pacifica*—Pacific cinquefoil, and *Trifolium wormskioldii*—wild clover). Within IJ's time, they were steamed on top of the stove in cast-iron kettles. This method was used if one had only a small quantity of bulbs or other food to cook. The bulbs were interspersed with layers of bracken and other fern fronds, and branches of salal (*Gaultheria shallon*) and red alder (*Alnus rubra*) (IJ). After being cooked, whether by pit or stove-top method, the bulbs were cooled and either eaten fresh or dried for later use, when they would be soaked in water overnight to rehydrate them. For drying, the bulbs were flattened like biscuits or hamburger patties, and, once dried, were stored in large cedar-bark storage baskets, interspersed with layers of clean, dried grass (IJ). The bulbs were often dipped in whale or seal oil, or, more recently, Mazola oil, as a dressing, but IJ liked to eat them plain. She remarked, "Oh, it's nice, it was sweet . . . I still miss it. Nobody goes out [and] gets some [nowadays]." The bulbs were usually eaten as the vegetable portion of a meal, along with meat or fish (JT). The Cowichan people on the east coast of Vancouver Island used to serve several camas bulbs on a plate to each guest at a potlatch or a winter dance, but this is no longer done (IJ).

During this study, IJ and CJ had an opportunity to eat camas bulbs again. These were cooked by both pit steaming and stovetop steaming methods, as part of a project undertaken by Turner and Dr. Harriet Kuhnlein, nutritionist at the University of British Columbia, to analyse nutritionally some important native Indian foods. The results of this study are published separately but some nutritional data for *C. quamash* are provided in Table 2.

There does not appear to be any nomenclatural distinction between the two species of camas in any of the language areas where both species occur (cf. Turner and Bell, 1971). The Nitinaht do not distinguish between them, but IJ recalled that the bulbs she used to eat were very large and implied a preference for those of *C. leichtlinii*, which seem to be significantly larger than those of *C. quamash*. (It should be noted, however, that at present *C. leichtlinii* is considered a rare species and should not be used as food.)

The Nitinaht name for camas, **kʷa·dis**, is probably identical to the Makah term (cf. "**kwa'dis**"—Gunther, 1973), and both are in the same etymon with the Nootka names (cf. Hesquiat and Manhousat—**kʷaẃus**) (Turner and Efrat, 1982; Ellis and Turner, 1976). In Nitinaht, as well as in Manhousaht and Hesquiat Nootka, the name for "fig" is based on the name for camas bulbs (see Appendix 4).

Disporum hookeri (Torr.) Nicholson var. *oreganum* (S.Wats.) Q. Jones (Fairybells)—see *Streptopus amplexifolius*

? *Erythronium revolutum* J. E. Smith (Pink Fawn Lily, or Pink Easter Lily), or possibly *Trillium ovatum Pursh* (Trillium)

ča·ča·waʕs (lit. 'sad ones on the ground'; cf. **ča·waqk** 'sad') (JT)

At first, JT applied this name to trillium, but said that it was used because the flower heads bent over. When it was pointed out that trillium flowers grow upright, he felt he must have been mistaken in his identification and that the name must really apply to *Erythronium*. He said that the plant in question had pink flowers and that it was common in the Nitinaht area. He said that white-flowered individuals would be called by the same name. As a youngster, JT was cautioned not to pick the flowers called **ča·ča·waʕs**, or it would become foggy and the ocean would get rough (see also note under *Scirpus acutus*—tule). Although JT seemed quite positive that the flowers bent over, Gunther (1973) identifies the Makah plant called "**tcatca'olk!us**" ("sad flower"—Gunther's translation) as *Trillium ovatum*, which would seem to confirm JT's original identification. Gunther (1973) stated that the Makah pounded the "bulb" and rubbed it on the body as a love medicine. The Hesquiat Nootka name for *Trillium*, **haẃaḥ** (Turner and Efrat, 1982), is not related to the Nitinaht or Makah terms.

Fritillaria camschatcensis (L.) Ker-Gawl. ssp. *camschatcensis* (Mission-bells, Rice-root, or Indian Rice)

CJ recalled that long ago the Sooke (Straits Salish) people used to dig a rice-like "root" at Jordan Meadows, and that it was cooked and eaten in a similar manner to the "root" of the tiger lily (*Lilium columbianum*). He said that it was considered to be ready to dig after the flowers had finished blooming. However, neither JT nor IJ recognized a specimen of the rice-like bulbs and seed capsules of this plant when shown some, nor did CJ, IJ or JT recognize the Hesquiat Nootka name, **ku·xʷapi·ḥ**, for the bulbs, which were eaten by the Hesquiat long ago (Turner and Efrat, 1982). One of the names given by IJ for *Lilium columbianum* appears to be related to this term, and may have actually applied to this species originally.

Lilium columbianum Hanson (Tiger Lily, or Columbia Lily) (Figure 61)

ƛaḵu·ʔb (IJ), *or* **kʷaxapx̣** (IJ)

IJ stated that the bulbs of this plant were eaten by the Nitinaht long ago but not within her own experience. The bulbs were formerly steamed in underground pits, in the same manner as camas bulbs (*Camassia* spp.), Pacific cinquefoil roots (*Potentilla pacifica*), and wild clover rhizomes (*Trifolium wormskioldii*). Her own mother-in-law used to steam them on top of the stove in a large cast-iron kettle; the other "roots" could also be cooked in this way (see *Camassia* spp., p. 83). All of these foods, including tiger lily bulbs, were served cold, usually with oil.

IJ noted that the Nitinaht people used to dig the bulbs from a small island along the south shore of Nitinaht Lake, about half way up the lake (apparently the one near the point opposite Doobah Lake). Tiger lily plants were said to be very abundant there (IJ). (This information may actually apply to *Fritillaria camschatcensis*, however—see note below.)

The first Nitinaht name, **ƛaḵu·ʔb**, appears to be related to the Makah form (cf. "**ɬ'kūb**"—Gunther, 1973). Both are unrelated to the Hesquiat Nootka name, **ʕanixsmapt** (cf. **ʕa·nis** 'great blue heron') (Turner and Efrat, 1982). However, the second Nitinaht name is apparently related to the Hesquiat Nootka name for *Fritillaria camschatcensis*, **ku·xʷapi·ḥ** (Turner and Efrat, 1982),* and may actually be the proper name for that species.

* Ellis and Turner (1976) note an unidentified "white berry", "**kwaxwapiḥ**", which is probably actually *F. camschatcensis*, since the name is similar to the Hesquiat. The "berries" are probably the rice-like bulblets around the main bulb.

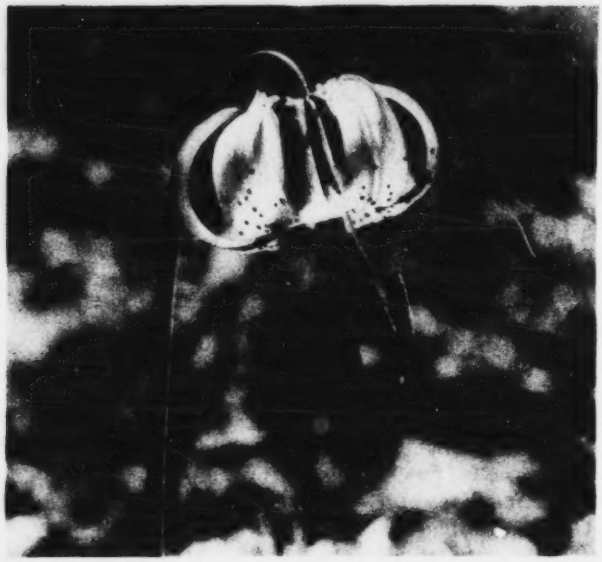

Fig. 61 Tiger lily *(Lilium columbianum).* (Nancy J. Turner)

Maianthemum dilatatum (A. Wood) Nels. & Macbride (Wild Lily-of-the-valley, or Two-leaved False Solomon's-seal)

None of the Nitinaht people consulted knew of a Native name for this plant, which is common in the Nitinaht area (JT, IJ, CJ, MT, LJ). Neither did they appear to associate the Makah and Nootka names with the plant (see below). No one had heard of the berries being eaten; MT stated that they were not. However, they were eaten by the Hesquiat Nootka and Makah (Turner and Efrat, 1982; Densmore, 1939), but probably only occasionally.

JT recalled that when he was a child, people used to use the leaves as a poultice for sores and boils. The leaf was simply tied on, underside down, and left on for awhile. It is said to help draw out the core of a boil. However, if left on too long, it can cause soreness or a mild rash on the skin (JT). It was also used on cuts, wounds, and minor burns (for severe burns, skunk-cabbage leaves were applied) (JT). As with skunk-cabbage, the undersides of the leaves were believed to have more of the healing substance on them than the top parts (JT).

The Nootka also used the leaves as a poultice for sores and wounds (Fenn *et al.*, 1979; Turner and Efrat, 1982). The Makah, Nootka, and Quinault Salish obtained an eye medicine from them as well (Densmore, 1939; Fenn *et al.*, 1979; Gunther, 1973). Makah women chewed the roots and swallowed the juice to correct sterility (Gunther, 1973). The Nootka names for this plant translate as 'thief plant' (cf. Hesquiat—**ku·ẇi·kmapt** for *Maianthemum,* and **ku·ẇi·k**—'given to stealing', 'always stealing') (Turner and Efrat, 1982; Fenn *et al.*, 1979), and according to Densmore (1939), the Makah name is similar: "**kuwi'kabuk**" (translated by Densmore as "stolen plant"). The explanations offered for this name vary considerably; apparently no one really knows how it originated. Gunther (1973) records the Makah name, "**tli'ikibupt**" (lit. 'snake plant') for *Maianthemum.*

Streptopus amplexifolius (L.) A. P. de Candolle (Common Twisted-stalk, or Cucumberroot Twisted-stalk), and *Disporum hookeri* (Torr.) Nicholson var. *oreganum* (S. Wats.) Q. Jones (Hooker's Fairybells, or Oregon Fairybells)

c̓uc̓uwaχsiɬi·c haʔub (lit. 'wolf's food') (IJ, CJ, MT)

Neither IJ, CJ, or MT knew of any use for these plants, medicinal or otherwise. They believed that the berries were eaten by wolves but that people did not eat them. They recognized that the two species were different but called both by the same name. Interestingly, the Hesquiat Nootka called *S. amplexifolius* "**muwač haʔumʔak**", or some variant of this name (lit. 'deer's food') (Turner and Efrat, 1982). Neither Gunther (1973) nor Densmore (1939) reported a Makah name for either of these plants, but Densmore (1939) stated that the roots of *Streptopus* sp. were chewed by women to induce labour, and Gunther (1973) noted that *Disporum* was used as a love medicine.

Trillium ovatum Pursh (Trillium)—see *Erythronium revolutum*

Xerophyllum tenax (Pursh) Nutt. (Bear-grass, or "American-grass")

Nitinaht: **ƛ̓i·ssukub** (lit. 'white-looking thing') (JT, IJ)

Makah: **q̓aɬtadis** (JT)

IJ used to buy this "grass" from the Makah at Neah Bay for use as a twining material in making the wrapped, twined, **puku?** baskets. It is called "American" grass, in contrast with the other twining material usually used, *Carex obnupta*, which is sometimes called "Canadian grass" (JT). At first, JT thought this might be the same as the ornamental pampas grass grown in many gardens on southern Vancouver Island; he had never seen the actual **ƛ̓i·ssukub** plant growing. The leaves are quite shiny and lustrous, even when dyed, and JT noted that they were not usually woven in the same basket with *Carex* leaves because the contrast in texture would be quite obvious. The leaves were also used for trimming the edges of mats; they gave the edges a whitish colour, as implied by the Nitinaht name (JT). The Hesquiat and other Nootkan groups also purchased bear-grass leaves from the Makah. The current price for a one-inch bundle of the leaves is said to be about $1.00 (Turner and Efrat, 1982; Fenn *et al.*, 1979). The Hesquiat name, **ƛ̓i·sukum** (cf. **ƛ̓isuk** 'white'), and the Manhousat, "**tl'iisukwum**" (Ellis and Turner, 1976), are related to the Nitinaht, but the Makah name, as given by JT, is unrelated linguistically. Neither Gunther (1973) nor Densmore (1939) recorded a Makah name for bear-grass although both noted that it was used in basketry.

Fig. 62 **Bear-grass *(Xerophyllum tenax)*. The tough leaves of this plant were imported by the Nitinaht from the Olympic Peninsula for use in basketry. (Robert D. Turner)**

POACEAE, OR GRAMINEAE (GRASS FAMILY)

Grasses and grass-like plants (apparently excluding *Carex obnupta* and *Scirpus americanus*) are called by the general, life-form term, **ʕaqpat** (JT, IJ, CJ), related to the Nootka names for this category of plants [cf. Hesquiat and Manhousat—**ʕaqmapt** (Turner and Efrat, 1982; Ellis and Turner, 1976)]. Only one species of native grass, listed in the following section, was given a "generic"-level name (see p. 47).

Clean, dry grass, of any kind that has reached maturity and turned yellowish, was placed at the bottom of a steaming kettle when food such as camas bulbs (*Camassia* spp.), cinquefoil roots (*Potentilla pacifica*), and wild clover rhizomes (*Trifolium wormskioldii*) was being cooked. Water was poured into the kettle up to the level of the grass and then the food was placed in layers over the grass, interspersed with fern fronds, and leaves of salal (*Gaultheria shallon*) and other vegetation (see general discussion on food plants, p. 18) (IJ). The grass served to keep the food out of direct contact with the water so that it would steam, not boil. According to Arima (1975–76), a small bight about 2 km ["1½" mi.] southeast of the Cheewhat River, where there used to be a small village or camp, is called "**qaq'obakis**," or "grassy beach".

Elymus mollis Trin. var. *mollis* (American Dune Grass, or Dune Wild Rye Grass)

qicsapt (lit. 'drawing/marking/writing plant')* (IJ, JT); *or* **čapxʷapt** (lit. 'male/man's plant'; cf. *Carex obnupta, C. lyngbyei*) (IJ)

JT stated that the sharply pointed, tough leaves were sometimes used as a "needle-and-thread" for sewing and tying some items.

In IJ's family, the long, soft, white rootstocks of this "wide grass" were twisted together into a thick, rope-like bundle and the ends tied into a knot. This bundle was then used by young men to rub their bodies when bathing; it was said to strengthen the body. IJ noted that this use was a family secret and called it one of her "million-dollar medicines".

Gunther (1973) noted that the Makah also used bundles of *Elymus mollis* "roots" to rub the body after bathing. Densmore (1939) stated that the basal portion of the stem, about two inches in length, was chewed by the Makah for stoppage of urine.

The origin of the first Nitinaht name, **qicsapt**, is not known. The second is related to the Makah name, "**tcupxa'bupt**" (Gunther, 1973). None of the Hesquiat Nootka names is related to either Nitinaht name (cf. Turner and Efrat, 1982).

TYPHACEAE (CAT-TAIL FAMILY)

Typha latifolia L. (Common Cat-tail)

salaɣa·ɬ (JT)

A large patch of these plants grows alongside one of tule (*Scirpus acutus*) in the upper reaches of the Cheewhat River floodplains (Figure 1). JT noted that it is fairly common in the Nitinaht area and that the leaves were used traditionally by the Nitinaht for making skirts and some types of openwork baskets, but not, as reported for some Nootkan groups (Fenn *et al.*, 1979; Turner and Efrat, 1982), for making mats. Gunther (1973) reports that the Quinault Salish also made lightweight openwork baskets from the leaves, and that they were of crossed-warp twine. However, she appears to have confused *Typha* with tule, for she notes that the Makah made mats of the fruiting stalks of cat-tail, and that these were called "the wife", whereas the "male" stalk, "**tcacu'p**" is never used. It seems likely that the "wife" plant she refers to is actually the round stems of tule, which are well known as a mat material and noted as such elsewhere in her book (under *Scirpus acutus*). In fact, as noted by Hesquiat consultants (Turner and Efrat, 1982), the fruiting stalks of cat-tail are actually called the "male" plant, and non-fruiting, vegetative plants were the "females".

The Nitinaht name for cat-tail is cognate with both Makah (cf. "**salaxa'xbupt**"—plant, and "**sala'xax**"—mat of cat-tail) (Gunther, 1973) and Nootka (cf. Hesquiat and Manhousat **saniɣmapt** applied by some to the fine leaf edges of cat-tail, by others to the whole plant) (Turner and Efrat, 1982; Ellis and Turner, 1976). The Hesquiats also use another name, **ɬačmapt**, for the cat-tail plant (Turner and Efrat, in 1982), but this does not appear to have a Nitinaht form. Since this term translates simply as 'woman's plant', it may have been used in a general or descriptive context.

* JT suggested that the leaves may have been used to mark a design in wood before it was carved and that this explains the derivation of the name. The leaves are not hard enough to mark wood directly; perhaps they were dipped in paint.

ZOSTERACEAE (EEL-GRASS FAMILY)

Phyllospadix scouleri Hook. (Scouler's Surf-grass)

taba·ɣ (see also *Zostera marina*—eel-grass) (JT, IJ, CJ)

Although this plant, which has bright, emerald green leaves, was called **taba·ɣ**, it was considered to be slightly different from the "real" **taba·ɣ** (*Zostera marina*), whose tender, sweet-tasting rhizomes were eaten in the spring. IJ stated that the real one had wider leaves than this one and grew "real long." CJ said that these plants (apparently including both *Phyllospadix* and *Zostera*), as well as the marine algae called **ɬuc̓ɬuc̓pt** (including *Lessoniopsis littoralis* and *Postelsia palmaeformis*), could travel on the rocks to a different depth of water or a more suitable location—"wherever they wish to stay."

The Nitinaht sometimes collected herring spawn from the leaves of *Phyllospadix* spp., considered to be the "tough" types of **taba·ɣ** (JT, LJ). They travelled up to Barkley Sound to get herring spawn because the herring rarely spawned in their area (see also *Tsuga heterophylla*—western hemlock). The long, tough leaves were harvested and dried with the spawn on. Then, when the spawn was to be eaten, the leaves were soaked in water and the spawn pinched off with the fingers (JT).

Phyllospadix torreyi S. Wats. (Torrey's Surf-grass)

This species, like the previous one, was apparently called **taba·ɣ**, although this name was more properly applied to the edible species of sea-grass, *Zostera marina*. However, when she saw a specimen of *Scirpus microcarpus* ("cut-grass"), IJ remarked that there was a narrow-leaved "grass" similar to it but which grew under the water and had very long, tough leaves. This narrow-leaved type was called **di·ʔdiḵʷapt** (lit. 'gripping plant', alluding to its characteristic of holding tightly onto the rocks), and IJ said she used to dry and split the leaves and use them in her basketry. It is possible that this species is *P. torreyi*, whose leaves grow up to 3 m long (Scagel, 1967) and were used in basketry by the Hesquiat Nootka (Turner and Efrat, 1982). The leaves of *P. torreyi* were undoubtedly used like those of *P. scouleri* to collect herring spawn (see previous species).

Zostera marina L. (Eel-grass)

taba·ɣ (IJ, CJ, JT) (see also *Phyllospadix* spp.—surf-grasses)

The Nitinaht used to eat the whitish, fleshy rhizomes of eel-grass. They were harvested in spring at low tide but they were seldom completely exposed. Usually one had to wade out in about 0.3 m (1 ft) of water and dig the "roots" out of the sand. JT recalls that people often ate them immediately after pulling them up and rinsing them off in the seawater. They were apparently not cooked, and CJ and IJ could not remember if they were dipped in oil before being eaten, but thought that they would have been, long ago. JT said "they taste very good—they are real tender", with just enough salt on them.

The leaves may have been used to collect herring spawn but probably the tougher-leaved *Phyllospadix* species were normally used for this purpose (see previous species).

Gunther (1973) mentions a seaweed (p. 50), whose "holdfasts", called "**kaɬkatsup**", were eaten by the Makah. Both LJ and JT feel that this term, which was also used by the Nitinaht (**kaɬ-kacapt**), actually applied to the edible rhizomes of the eel-grass, and that Gunther (1973) was mistaken in her description of the plant. The Nitinaht term, **taba·ɣ**, does not appear to have related forms in either Makah or Nootka. Gunther (1973) gives the Makah name, "**xûxwa'p**" for *Phyllospadix scouleri*, but says that in spring the Makah eat the roots of this "grass" raw, implying that this name actually applies to *Zostera*, which is not cited by Gunther (1973) elsewhere. The Hesquiat and Manhousat Nootka had a variety of terms relating to *Zostera* and *Phyllospadix* spp., but none seems linguistically related to "**taba·ɣ**" (cf. Turner and Efrat, 1982; Ellis and Turner, 1976).

ANGIOSPERMS (Flowering Plants—Dicotyledons)

ACERACEAE (MAPLE FAMILY)

Acer circinatum Pursh (Vine Maple) (Figure 63)

daqcapt (lit. 'drinking-bowl plant'; cf. **daqac** 'drinking bowl') (JT)

Vine maple does not occur along the coastal part of the Nitinaht territory; people used to travel up-river to near Cowichan Lake to obtain the wood (JT, MT). The wood was used to make bows and was considered almost as good as yew for this purpose. However, the most important use of vine maple was in making small boxes and bowls. One type of container, for whale or seal oil, is called **ƛaqsac**, or **ƛatukʷac** (Thomas and Hess, 1978). Another type, for drinking, is **daqac** (JT). It is not clear whether the name for this bowl is derived from the name for the tree, or vice versa. However, according to JT, vine maple was the main material for **daqac** bowls, and only vine maple wood was dense enough that oil would not eventually soak through it; hence it was virtually the only material used for oil containers. [Whale and seal oils were used as a condiment and were served along with dried fish and many other foods in the traditional Nitinaht diet. Seal oil is still used today by some people, but it has been generally replaced with Mazola and other vegetable oils (JT).] Vine maple was used in constructing salmon weir fencing, according to Arima (1975-76). Three or four horizontals of vine maple were lashed with cedar withe rope to upright stakes of yew. Cedar poles were set close to form the bulk of the fencing.

The name, **daqcapt**, for vine maple, appears to be unique to Nitinaht. Names for this species have apparently not been recorded for Nootka or Makah in published sources.

Fig. 63 Vine maple *(Acer circinatum)*. (Robert D. Turner)

Acer macrophyllum Pursh (Bigleaf Maple, or Broad-leaved Maple)

ʕibiċqapt (JT)

Like vine maple, the bigleaf maple is not common in Nitinaht territory and was usually obtained inland, near Cowichan Lake (JT, CJ). However, Arima (1975–76) notes that a beach about 1 km ("half a mile") east of Jordan River, where 20 or 30 maple trees lined the shore, was called "**ʔe:betsesaqpe:s**", or "maple beach". The wood is hard, but lightweight when dry, and light in colour and, for this reason, it was valued for making paddles and masks and sometimes for ceremonial rattles (JT, MT). It was probably also used for bowls. In making a mask, the section of trunk to be used was split in half, through the heart of the tree, and the inside portion of the trunk was carved to form the outside of the mask. JT stated that a mask made in this fashion would not crack or split because it would have edge-grain all around it. The best canoes were made in a similar manner; this practice was called **diɬa·bɬʔa·ʔaq** (lit. 'finished product made from the inside out') (JT) (see also *Thuja plicata*—western red cedar). (However, identification of the wood in masks in museum collections suggests that masks of maple are rare.)

Bigleaf maple was used by some Nootka groups as well for making rattles (Turner and Efrat, 1982), and for plates, bowls, and utensils (Fenn *et al.*, 1979). The Hesquiat Nootka names for the tree, **ʕamiċapt**, or **ʕamiċaqmapt** (Turner and Efrat, 1982), appear to be cognate with the Nitinaht name. Neither Gunther (1973) nor Densmore (1939) gives a Makah name for *A. macrophyllum*.

APIACEAE, OR UMBELLIFERAE (CELERY FAMILY)

Angelica genuflexa Nutt. (Kneeling Angelica)

IJ, JT, CJ, and MT all recognized this species and remarked on its similarity to *Heracleum lanatum*, the cow-parsnip. MT called it "**ʕayxʷqʷapt**", but, as IJ and JT pointed out, this is actually the name for *Oplopanax horridum*, devil's-club. However, it is also similar to the Nitinaht name for *Lomatium nudicaule*, to which *Angelica* is botanically related. IJ said that it was just like "**ciysapiaq**", (*Sambucus racemosa*—red elderberry) but JT said that it was too small, that it never grew into a shrub. Then, IJ said that it was very similar to, but not quite the same as, "**waʕi·ẇ**" (*Oenanthe sarmentosa*—water-parsley). JT said that when he was a youngster at Clo-oose, he and the other children use to play with the inflated leafstalks with the young, unexpanded leaves still attached. They would stick four small twigs into the swollen portion to make it look like a cow or some other animal. No one recalled any other use for the plant. It is not mentioned in ethnobotanical literature for Makah or Nootka, although Densmore (1939) recorded that a related species, *A. lucida* L. (seacoast angelica—called "*Coelopleurum longipes* C. and R." by Densmore), was chewed as a physic by the Makah.

Heracleum lanatum Michx. (Common Cow-parsnip) (Figure 64)

flower-bud stem (hollow): **hu·ba·q** (JT, IJ)

leafstalk (solid): **qistu·p** (JT, IJ)

plant: **qistu·papt** (JT)

The Nitinaht, like the Nootka, Makah, and many other Northwest Coast peoples, used to eat the young leafstalks and flower-bud stems of this plant in the spring (cf. Turner and Efrat, 1982; Fenn *et al.*, 1979; Ellis and Turner, 1976; Gunther, 1973; Turner, 1975). In the Nitinaht area, they were ready to eat by the end of April and, depending on the location, could be harvested until July or even August (JT). The plants growing in the shade could be harvested later in the season and were more tender than those in the sun. Plants growing in the open became too woody by mid-May (JT). JT noted that the hollow stalks (flower-bud stems) grew right in the centre of the plant and that the solid (leaf) stalks were picked from right around the hollow ones. Both types could be eaten after being peeled. They are usually cut off at the base with a knife (JT, IJ).

Peeling the stalks before eating them is very important because this plant, especially the skin, contains a light-activated chemical, a furanocoumarin, which can cause severe blistering and darkening of the skin and lips in the presence of ultraviolet radiation (i.e., in sunlight) (Camm *et al.*, 1976). Neither JT nor IJ recalled having any skin reaction from handling the plants and no special measures, such as wearing gloves, were taken when harvesting the shoots. However, JT did stress that if one eats too much, he is liable to get sore, cracked and blistered lips and that one should

Fig. 64 Common cow-parsnip (*Heracleum lanatum*). (Robert D. Turner)

always wash his lips after eating it, or he would get a sore, something like a cold sore, on his lips. In addition, he cautioned that a pregnant woman should not eat the **hu·ba·q** shoots or, it was thought, her child would become an epileptic. She could eat **qistu·p** shoots, however, without harmful effects (JT). Luke Swan of Manhousat also stated that if a pregnant woman ate **huɬa·k**, her baby would lose its breath when it cried, then choke. He said that the leaves and stem should be knocked with a stick to release the "dust", which would otherwise cause "burning" and spotting of the skin (Ellis and Turner, 1976).

Traditionally, both types of shoots were dipped into whale or seal oil before being eaten but, within JT's memory, this was not done. Instead, the shoots were dipped into sugar. They were eaten raw, not cooked (JT, IJ).

When JT was a child, he and the other children used to make toy animals from the swollen leaf sheath and small unexpanded leaf of this plant (see also *Angelica genuflexa*). JT was told never to touch strong-smelling plants such a cow-parsnip and stink currant (*Ribes bracteosum*) when he was going fishing, or he would not catch any fish (JT).

The Nitinaht name for the flower-bud stems, **hu·ba·q**, is related to the Nootka (cf. Hesquiat and Manhousat **huɬa·q**—Turner and Efrat, 1982; Ellis and Turner, 1976). JT knew of no derivation for the Nitinaht form, but Luke Swan of Manhousat suggested that **huɬa·q** was related to the term, **huɬaqiX** 'to choke' (Ellis and Turner, 1976). No Makah term for the bud stems was recorded by Gunther (1973), but she did note a related form for the leafstalks, "**kI'stop**" (cf. Nitinaht **qistu·p**). The Nootka term for the leafstalks is also in the same etymon (cf. Hesquiat and Manhousat, **qiɬcu·p**—Turner and Efrat, 1982; Ellis and Turner, 1976).

Lomatium nudicaule (Pursh) Coult. & Rose (Indian Consumption Plant, "Indian Celery", or Barestem Lomatium)

Nitinaht: **ʕaʕayx̣ʷqʷuʔ** (JT, IJ) [lit. 'medicine for codfish lure'—see also devil's-club, (*Oplopanax horridus*)]

Halkomelem (Kuper Island) Salish: **ɬəχ̣mín** (JT—originally he gave the form **ɬaχ̣mí·n**)

JT knew this plant by both of the above names, but recognized the second as a Salish name, from the Kuper Island people. The plant does not grow in Nitinaht territory (IJ, JT) but the Nitinaht

people sometimes obtained the seeds through trade with the Straits Salish in Victoria, or by harvesting them for themselves from the meadows around Beacon Hill Park in Victoria or near Comox (IJ, JT). The aromatic seeds, which have a strong celery taste and odour, were valued by the Nitinaht, as they were by most Coast Salish groups and the Southern Kwakiutl (cf. Turner and Bell, 1971, 1973), as a medicine for colds and as a protective fumigant. For colds, the seeds were soaked in hot water and used while still warm as a chest poultice; the patient could breathe in the soothing vapours. In the case of an epidemic, or a death in the household through illness, the seeds were burned in the fire or placed on a hot stove and the smoke allowed to fumigate the house. This was said to ward off bad spirits and protect the inhabitants from harm (IJ, JT).

The derivation of the Nitinaht term for this plant indicates some use of the seeds or leaves in the making or use of devil's-club codfish lures, possibly as a scent or charm, but this use is no longer recalled (JT). No equivalent forms have been recorded in ethnobotanical literature for Nootka or Makah. Various forms in the same etymon as **ƛ̓ax̌mi·n**, are used by different Coast Salish groups (cf. Straits and Squamish—**qəx̌mín**; Sechelt—"**qax̌ámin**"—Turner and Bell, 1971; Bouchard and Turner, 1976; Turner, 1972), and Southern Kwakiutl ("**qex̌emín**"--Turner and Bell, 1973).

Oenanthe sarmentosa K.B. Presl ex A.P. de Candolle (Water-parsley) (Figure 65)

waʕi·ẇ [cf. **wa·q**—'circumcised'; **-i·ẇ** 'spherical object'—see also bull kelp (*Nereocystis luetkeana*)] (IJ, CJ)

The thick "onion-like", root-crown of this plant was a special medicine for IJ. It was given to her by her mother-in-law, CJ's mother, and, as IJ explains in the following quotation, its identity was kept secret:

> "It was a really important and expensive medicine. Nobody knew it. His [CJ's] mother used to chew it up so nobody will know what it is when they buy it off her. So it's real expensive. Like onion, way down, that root. She used to squash it up when I had my labour, getting babies . . . after you swallow it the baby comes . . . I never go to the hospital to have my babies. I used that stuff, so I won't have to wait too long [and] suffer. I

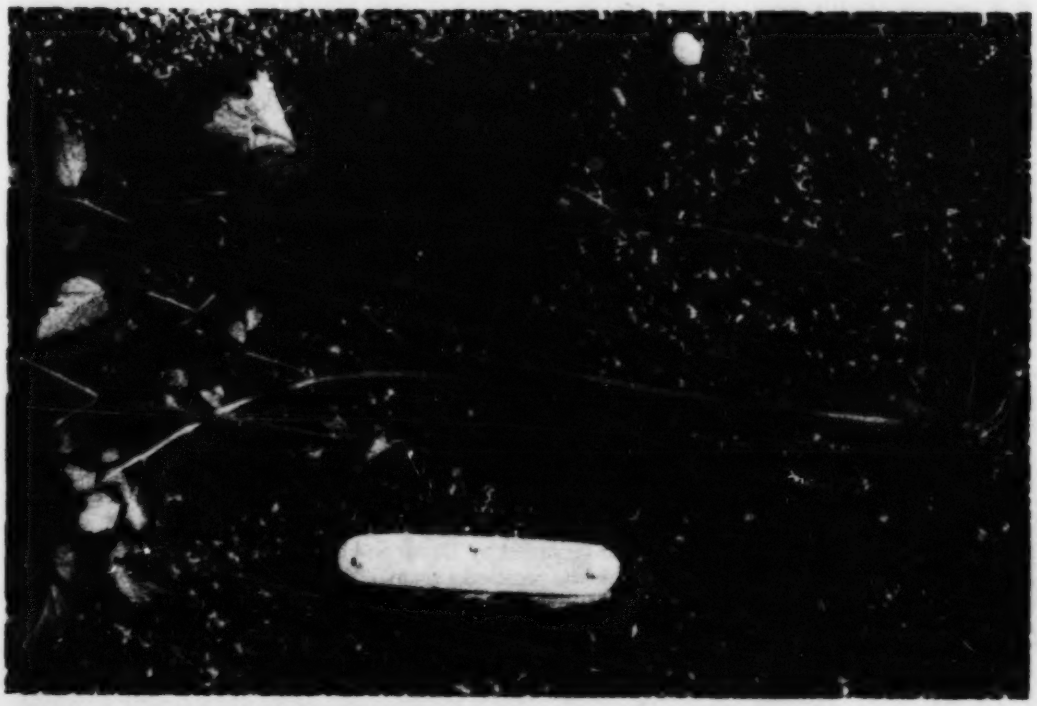

Fig. 65 Water-parsley (*Oenanthe sarmentosa*). (Nancy J. Turner)

hate to go to the hospital! I don't like it. It's more suffer[ing]. When I'm alone I just [take that] . . . helps, that thing helps. It makes the baby born real quick, about half an hour after you swallow, or twenty minutes. You keep swallowing it more and more. It's awfully hard to swallow, it doesn't taste nice. But my mother-in-law used to squash it up and make me drink a little bit of water with it. And I couldn't used to swallow, I used to . . . throw up, and come back. But I try to swallow. Everybody was trying to find out what it is. That's passing on from way back. So, the Indians don't have to, didn't have any doctors."

IJ stated further that, the round, chewed-up root could be seen on the baby's bottom when it was born, so fast did the medicine work.

The use of this plant as a medicine for speeding up labour in childbirth is a particularly interesting one. We felt very grateful to Mrs. Jones for sharing this "million-dollar medicine" with us, especially since it had been a well kept family secret. She realized, however, that such secrets would soon be lost forever unless they were recorded and the correct identity of the medicine established. It should be noted that she had 12 children and that all but one were born at home under minimal supervision.

Although IJ identified this medicine from a fresh, live specimen of *Oenanthe sarmentosa*, there was some question at first whether she may have confused this plant with other, similar species in the celery family. The following day she identified a specimen of *Conioselinum pacificum* (S. Wats.) Coult. & Rose (Pacific hemlock-parsley) as **waʕɬ·ẇ**, and her description of a spherical "onion-like" root of the medicine brought to mind the highly toxic *Cicuta douglasii* (A.P. de Candolle) Coult. & Rose (Douglas' water-hemlock), which has a spherical, chambered root crown. Usually described as "turnip-like", this swollen structure could be considered "onion-like". Although this latter species is used medicinally by some Northwest Coast peoples* (cf. Southern Kwakiutl—Turner and Bell, 1973), it is extremely poisonous and its use as a childbirth medicine would be surprising and somewhat shocking. However, after having checked the identity of **waʕɬ·ẇ** with IJ to the point of bringing her near the end of her patience, and digging up several specimens of *Oenanthe* to reveal that the plant does indeed have an "onion-like" root crown, we were satisfied with her original determination. The fact that *Conioselinum pacificum* grows only near the ocean, and has a long taproot rather than a spherical root crown, seems to be a clear enough indication that IJ was confused in her second identification, as she noted that **waʕɬ·ẇ** did not necessarily grow near the beach. Later, she was able to distinguish both *Angelica genuflexa* and *Cicuta douglasii* from the real **waʕɬ·ẇ**, although she knew of no Nitinaht names for either of these species.

MT was shown a specimen of *Oenanthe* but knew of neither a Nitinaht name nor any use for the plant. However, IJ's identification was confirmed at a later date by Alice Paul of Hesquiat (R. Bouchard, pers. comm., 1982—see later discussion).

As well as being a potent medicine in childbirth, **waʕɬ·ẇ** also featured in Nitinaht mythology. In a story recounted by CJ called *Stealing Daylight* (Touchie, 1977), it is described how Mink used this "medicine" to help him to obtain some of the necessities of life for his people. Long ago, according to this story, the land was in total darkness. The wind was strong and continuous, and blew from one direction only—the northeast. Mink went with Skate, Octopus, and many other animals to try to find where the wind was coming from so that they could put a stop to it. The animals, except for the three named, eventually gave up, and these three continued until they came to a house from which the strong wind blew. The house was guarded on either side by a codfish, a fire was burning inside the house and, within, there was a child swinging from his cradleboard. First, Mink threw the **waʕɬ·ẇ** medicine into the mouths of the codfish sentries, and it made them clamp their mouths together. Then he threw some of the medicine on the fire and the fire was put out and the wind stopped blowing. Mink then took the child back home with him and used him as a ransom. To get his child back, the chief who owned the house had to promise to give Mink and his people daylight, tides, seasons, fire, fish for food, the sun and moon, and four kinds of wind: north, west, east, and southeast.

No Hesquiat name for *Oenanthe* was recorded by Turner and Efrat (1982) but Alice Paul stated that the stems were formerly eaten. Later, she recalled a plant, "**wa7̲ʷu**", which she confirmed as water-parsley. She had been reminded of the name by the name of a former village north of Long Beach, "**wa7̲ʷiwa**". Apparently the village was named after the plant. The people who lived there were called "**ʷwa7̲ʷuuth̲**" (R. Bouchard, pers. comm., 1982). Gunther (1973) recorded the Makah

* Recently, however, one of the authors (NT) learned that *Oenanthe* root was and still is an important purgative medicine for the Bella Coola. Previously, it had been erroneously identified as *Cicuta douglasii* (Turner, 1973).

name, "**wawaki' xbupt**" (lit. 'frog plant', according to her), for this plant, and noted that the mature stems were used by the Makah to make whistles, and that the root was pounded between stones and used as a laxative, "said to be very potent." This use relates somewhat to that recounted by IJ for Nitinaht, and the Makah and Nitinaht names may be linguistically related.

ARALIACEAE (GINSENG FAMILY)

Oplopanax horridus (J. E. Smith) Miq. (Devil's-club) (Fig. 66)

plant: **ʕayx̣ʷqʷapt** (IJ, JT)

codfish lure (of devil's-club): **ʕayx̣ʷqeyḵ** [see also Indian consumption plant (*Lomatium nudicaule*)]

black sea-bass lure (of devil's-club): **ha·ʔaɬaḵ**, or **ha·ʔaɬ** (JT)

MT applied the name **ʕayx̣ʷqʷapt** to *Angelica genuflexa* but she was apparently mistaken since both IJ and JT were quite positive that it was the name for devil's-club, which is a very distinctive shrub. It is more probable that she was confusing the name with that of *Lomatium nudicaule*, which is related to *Angelica*, but has a name similar to that of devil's-club, meaning 'medicine for codfish lure'.

Devil's-club wood is lightweight and very light in colour—almost white (JT). It was used, as it was by the Nootka and Clallam Salish (cf. Turner and Efrat, 1982; Ellis and Turner, 1976; Gunther, 1973), in making fishing lures. At least two types of lures were made from this wood by the Nitinaht. One, called **ʕayx̣ʷqeyḵ**, was for codfish. It is uncertain whether the name for devil's-club is derived from the name for this lure, or whether the lure was named after the material it was made from, but the two words are obviously linguistically related. The **ʕayx̣ʷqeyḵ** lure was apparently made from two pieces of devil's-club wood, tapered and flaring outwards at one end and bound together with lashing of bitter cherry bark at the other (see Figure 31, p. 37) (JT). The lure was about 20 cm (8 in.) long, according to JT, and it was fixed on the end of a pole of Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*) about 3 to 4 m (10 to 12 ft.) in length. This pole was thrust down into the water, then jerked

Fig. 66 Devil's-club *(Oplopanax horridus)*. (Nancy J. Turner)

up, allowing the lure to detach and twirl up to the surface propeller-fashion. The codfish, seeing the lure and perhaps mistaking it for food, would follow it to the surface, there to be speared by the waiting fisherman (IJ, JT). IJ recalled that two men would work together with this type of fishing; one would put the lure into the water with the pole, and the other would spear the fish when it came up.

The second type of devil's-club lure was fixed with a hook and attached to a line. It was used mainly for sea, or black, bass (**qitap**), and was called **ha·ʔaɬaƛk**, or, as JT noted, when one was fishing with it, he would just say **ha·ʔaɬ**. It was about 8 cm (3½ in.) long, and was somewhat fish-shaped, being tapered at the line end, and rounded on one side and flattened on the other (see Figure 32, p. 38). An "old-style" lure had a straight prong of elk bone lashed to the end as a hook. More recently a curved, barbed metal hook was used. A small stone was tied on the front of the lure so that when it was towed through the water on a line, the lure would rotate, or "spin", and attract the fish. JT said this was a very effective type of lure and that one could catch many sea bass with it.

A medicine for arthritis was made by scraping the spines off devil's-club stems and infusing several pieces of stem in water, just as one would make tea (JT). This was drunk in place of any other beverage over a period of many days. At first, the patient would drink a large quantity of the infusion—as much as he could. However, JT noted that the medicine is very bitter and gets even stronger after it sits for awhile. Therefore, the dosage became less and less as the medicine aged. JT said, "When you take medicine like that, you don't drink anything else, or else it won't work."

Charcoal made from devil's-club wood was used as a special ceremonial face paint by Nitinaht dancers. It was said to give protective powers to the dancers. JT stated that it was so powerful that one could not look a dancer who was wearing it directly in the eyes. JT explained, "The reason they use this kind of wood [in dancing] is because it's sharp. When you see somebody with that kind of paint, you couldn't look them in the eye. Their power is so strong." Many different types of prickly and thorny plants are attributed special protective powers by western North American Native people (cf. Turner *et al.*, 1980—*Rosa* spp.; Turner, 1973—*Ribes lacustre*; and, in the present study, see *Cirsium* spp.—thistles).

No Makah name or use for devil's-club was given by Gunther (1973) or Densmore (1939). The Hesquiat and Manhousat Nootka name, **ʔa·ƛa·ɬmapt**, (Turner and Efrat, 1982; Ellis and Turner, 1976) is not linguistically related to the Nitinaht name. However, there is some possibility that the Nitinaht name is borrowed from Straits or Halkomelem (Cowichan dialect) Salish, whose name for devil's-club is **qʷaʔpaɬp** (cf. Turner and Bell, 1971). The Straits and Clallam Salish were known to have used devil's-club charcoal for face paint in a similar manner to the Nitinaht (Turner and Bell, 1971; Gunther, 1973).

Asteraceae, or Compositae (Aster Family)

Achillea millefolium **L. (Yarrow)**

ƛastpapt (cf. **ƛastupi·** 'to get white spots on one's skin'*) (IJ, MT)

IJ's grandfather warned her never to touch this plant because it would cause white spots, something like ringworm, to form all over one's face. As can be seen, the name for the plant is apparently derived from this characteristic. IJ said that children were afraid to touch yarrow because of this. She explained, "When . . . it gets on your hands, that stuff, when you touch your body, it gets white spots on your skin." At first she could not recall the plant ever being used as a medicine but, on another occasion, she said, "We eat this, chew up and swallow it—medicine for the body, for everything." MT recalled that her grandmother, **ʔu·kʷa**, used to use the yarrow plant to make a medicine for colds. She placed it in a pot, boiled it, then drank the decoction. JT also remembered that his grandmother (the same lady, as JT and MT were cousins) used to make him chew the leaves to keep from getting a cold, or, if he had a cold, to cure it.

Yarrow is known to have many medicinal uses among Northwest Coast Indian groups, especially for colds and respiratory ailments (cf. Turner and Bell, 1971, 1973; Turner, 1973; Turner and Efrat, 1982; Densmore, 1939). The Makah used it as a childbirth medicine and for tuberculosis (Gunther, 1973; Densmore, 1939). The Hesquiat chewed the plant and swallowed the juice for any

* JT suggested a derivation from the Nitinaht **ƛastup** 'things for sliding' (cf. **ƛasiƛ** 'to slide'), but in view of the similar translation of the cognate Makah name and the linguistically related Nootka name for the lichen *Loboria*, his suggestion is probably a folk etymology.

kind of internal pain, particularly for a prolonged cough (Turner and Efrat, 1982). Yarrow contains small amounts of menthol and also β-thujone. These compounds undoubtedly feature in the medicine properties of this plant, but both can be harmful if taken in excess (Hall, 1973).

The Nitinaht name for yarrow, **ƛastpapt**, is related to the Makah name, "**klastu'bat**" (Densmore, 1939—translated by her as "blossoms look like the spots on a child's face when peeling from sunburn"). The Hesquiat Nootka name, **ƛa·ƛa·xtaʔu·ɬ** (lit. 'it's bushy') is unrelated. However, the Hesquiat name for *Lobaria pulmonaria* Hoffm. (lung lichen) is **ƛacƛastupɬʔum** (cf. Hesquiat **ƛastupiiƛ** 'to have patchiness from too much sunshine'), apparently derived from the use of this lichen as a medicine for sunburned faces of children, and from the spotted, "patchy" appearance of the lichen itself (Turner and Efrat, 1982). There is probably no significance to the similar derivations of the Hesquiat term for lung lichen and the Nitinaht name for yarrow, but the connection is nevertheless interesting.

Anaphalis margaritacea (L.) B. & H. (Pearly Everlasting)

IJ did not remember the name for this plant, but said that her grandfather told her to rub her hands with it to make them soft when she was going to be touching or handling sick people. Densmore (1939) noted a similar use among the Makah, who called the plant "**ptiklo'kobûp**", which is said to mean "to make the skin soft". A young Makah girl would massage her body with a wad of the leaves, after bathing, to soften the skin (Densmore, 1939). Gunther (1973), or her Makah consultant, appears to have confused this plant with the previous species (see *Achillea millefolium*), as she recorded the name, "**Ła'ʔstupbupt**" for it and stated that children were not allowed to play with the plant because it makes sores. Contemporary Hesquiat people did not recall a name or use for this plant (Turner and Efrat, 1982).

Arctium minus (J. Hill) Bernh. (Common, or Lesser Burdock)

k̓ʷitik̓ʷtšapt (lit. 'stick plant') (MT)

This plant was introduced to the Nitinaht area and is a common weed. IJ recalled that she was already middle-aged before it started growing at Whyac village. She said her uncle thought that it had been brought in in boxes of groceries, such as potatoes or vegetables, which were imported to Whyac and Clo-oose by the case. Burdock is now a conspicuous part of the flora at Whyac (see also Appendix 4).

Artemisia suksdorfii Piper (Suksdorf's Mugwort, or Suksdorf's Wormwood)

IJ recognized this plant as being very common along the beaches at Port Renfrew but knew of no Nitinaht name for it. She said it was sometimes dried and hung in bundles in the house to make the room smell nice and fresh.

Cirsium brevistylum Cronq. (Short-styled Thistle, or Bull Thistle), and other *Cirsium* species (Thistles)

šačkapt (lit. 'sharp plant') (CJ)

The above name was used generally for any thorny or spiny plant, such as blackberry (*Rubus* spp.), but was also applied at a "generic" level to thistles (JT). CJ noted that long ago, thistle down, from thistle plants that had gone to seed, was sometimes used in place of dog hair for spinning, if the latter were not available. It was not spun by itself, but was spun together with the inner bark of yellow cedar, to soften the bark and make it suitable for use in baby clothing and other items requiring particular softness (see *Chamaecyparis nootkatensis*).

The sharp qualities of thistles (see also *Oplopanax horridus*—devil's-club) made them valuable among the Nitinaht for protection against evil powers or sickness. The leaves or roots were dried and placed around the house to protect the inhabitants if they were nervous or scared of something. Or, alternately, one could wrap up a piece of the root and keep it in his pocket and no evil person would touch him (IJ).

No Makah name for thistles was given by Gunther (1973) or Densmore (1939), although the latter noted that the root of *Cirsium* sp. was used for pain in confinement. The Hesquiat Nootka name for thistle, **sačmapt**, is related to the Nitinaht form, but no protective use for the plant was noted (Turner and Efrat, 1982). The Straits Salish (Saanich), however, did attribute protective powers to thistles, on account of their sharpness. They put the leaves in a person's bathwater as protection,

particularly before large gatherings such as feasts and potlatches, where evil influences might be present (Turner and Bell, 1971).

Petasites frigidus (L.) Fries var. *palmatus* (Ait.) Cronq. (Palmate Colt's-foot)

ƛ̓ɯ-dupi-c ha?ub (lit. 'elk's food') (IJ, CF)

According to IJ, only the elk eat this plant; it was not used for anything by the Nitinaht. Densmore (1939) gave the Makah name as "**kwaĭ'yabup**" (translated by her as "turns the mouth brown"), and said that the Makah mashed the root and used it as a poultice for severe bruises. She noted also that the Makah placed colt's-foot leaves with salmonberry shoots (*Rubus spectabilis*) being cooked in steaming pits, to season the shoots.

BERBERIDACEAE (BARBERRY FAMILY)

Mahonia aquifolium (Pursh) Nutt. (syn. *Berberis aquifolium* Pursh) (Tall Oregon-grape), and *M. nervosa* (Pursh) Nutt. (syn. *Berberis nervosa* Pursh) (Common, or Dull Oregon-grape)

ẋuk^{w}štqapt (lit. 'Raven's-plant') (JT)

JT had never heard of the berries being eaten by the Nitinaht, but confirmed that a yellow dye was made from the bark, as it was by many different Indian groups (cf. Turner, 1979). The dye was prepared by scraping the stems and probably the roots (apparently of either species) and steeping the bark scrapings in boiling water. Then the material to be dyed, usually basket "grass" (see *Carex obnupta* and *Xerophyllum tenax*) was soaked in the yellow-coloured infusion for several hours (JT). The yellow colour obtained from this dye is called **šašabaḵ̓^{w}** (lit. 'looks like feces') (JT). The use of Oregon-grape as a yellow dye was also noted for the Makah by Densmore (1939), who called it "the root of grapevine", and by Gunther (1973), who stated that the plant was not found in Makah territory, and that they traded for the root or gathered it when travelling.

JT's mother once told him that Oregon-grape was good for some kind of medicine, perhaps a laxative, but he could not recall any details.

The Makah also called Oregon-grape 'Raven's plant' ("**kluksitɬkobupt**" and believed that the berries if eaten would make children ill (Gunther, 1973).

BETULACEAE (BIRCH FAMILY)

Alnus rubra Bong. (Red Alder)

qaqapt (JT, IJ, CJ)

JT noted that if there are not alder trees near a lake, pond or stream, then the water is not fit to drink. He explained further that even animals can tell when water is not good to drink and that if one sees animal tracks around a creek or a pond, the water is considered safe for drinking. These indications are especially helpful for a pool where there is no apparent runoff. Normally this water would not be drunk, but if there were alder trees or animal tracks nearby, it would be safe to drink (JT). Alder leaves and branches were used in steaming pits and kettles, and were placed over and beneath the food being cooked (IJ).

The wood of alder is fairly soft and easily carved when still green, but when dry it becomes hard. These qualities made it a good material for carving such items as masks, ceremonial rattles (Figure 33, p. 39), canoe bailers and probably bowls (JT). JT's grandfather used to make small, model canoes from it. The best masks were carved from a half section of alder trunk, where the inside of the trunk formed the outside of the mask (see also *Acer macrophyllum*—bigleaf maple). (However, masks of alder are apparently rare in museum collections.) The Makah also used alder for canoe bailers, as well as for oil containers (Densmore, 1939) and babies' cradles (Gunther, 1973). Alder was also valued by the Nitinaht, as it was elsewhere on the Northwest Coast (Turner, 1979), as a fuel for drying and smoking fish and meat because it has little pitch in it and will not adversely flavour the food (JT).

Alder bark is a well-known source of reddish dyes; in fact the name, red alder, originates from the red staining property of the bark. The Nitinaht used the bark as a dye, as did many other Indian groups (cf. Turner, 1979). The dye was made by crushing the bark from a relatively mature tree on a rock. Bark from a sapling would not yield enough substance for making dye, but if the tree were too old, the bark would be too coarse and pulpy. The ideal tree would be about 15 cm (6 in.) in diameter (JT). The crushed bark was infused in hot water and the material to be coloured was then soaked in

the resulting solution. The intensity of red colouring could be varied by adding more or less bark to a given amount of water. The usual materials to be coloured were paddles and basket materials, including "grasses" (*Carex obnupta* and *Xerophyllum tenax*) and cedar bark (*Thuja plicata*, and possibly *Chamaecyparis nootkatensis*) (JT). The tannins in the bark undoubtedly had a preservative effect on these materials, as well as simply imparting colour to them (see also *Tsuga heterophylla*—western hemlock). JT stated that the alder dye was not used on fishnets and fishing lines, as it was by some Northwest Coast groups (Turner, 1979). Hemlock bark dye was usually used for colouring these items, and yielded a darker brown colour.

Alder bark was also valued as a medicine. It was crushed, together with the barks of western hemlock and grand (or possibly amabilis) fir (*Abies* spp.), in equal proportions. The crushed barks were then steeped in hot water, as in making tea, and the resulting infusion was allowed to cool. It was then drunk freely, replacing water or any other beverage, by a person suffering from any type of internal injuries, including broken bones, such as ribs, bruises, or undiagnosed injuries from falls and other accidents. It was also taken as a cure for tuberculosis and other lung ailments (JT). It was said to be very effective and would heal a person quickly (JT). Likely it is the tannins present in these barks, which would have astringent action when applied to living tissue (cf. Claus *et al.*, 1970), that, at least in part, form the basis of the therapeutic value of this medicine.

The Hesquiat Nootka also used alder bark, usually boiled with hemlock bark, as a medicine for internal ailments and tuberculosis (Turner and Efrat, 1982). The Makah used a decoction of the crushed bark to treat a person with severe pain in the back; the patient drank this decoction freely (Densmore, 1939).

The Nootka name for alder (cf. Hesquiat and Manhousat—**qaqmapt**) is related to the Nitinaht (Turner and Efrat, 1982; Ellis and Turner, 1976). Densmore (1939) recorded the Makah name "**kwasa'mbat**" for this tree, but it does not appear to be linguistically related to the Nitinaht and Nootka names.

CAPRIFOLIACEAE (HONEYSUCKLE FAMILY)

Lonicera ciliosa (Pursh) A.P. de Candolle (Orange Honeysuckle)

None of the Nitinaht consultants knew of a name for this vine but JT recalled that children used to suck the corolla tubes for their sweet nectar.

Lonicera involucrata (J. Richards.) Banks ex Spreng. (Black Twinberry, or Twinflower Honeysuckle) (Figure 67)

ƛ̓ix̌ʷi·capt (lit. 'monster's/ghost's plant') (IJ, LJ)

IJ and CJ stated that the berries were not eaten, although CJ said that her daughter, Flora, used to eat them sometimes when she was a little girl, apparently without ill effect. IJ knew of no use for the plant, but LJ said that it was used as a tonic for sickly people, especially those who have had a nervous breakdown. If the plant was still in bud, in the spring, the person would eat four buds, or, when the leaves had already expanded, the bark was used and was simply rubbed on the person, along with elderberry bark (*Sambucus racemosa*). LJ did not like this shrub very much, a feeling apparently relating to its name, which she translated as 'ghost's food'. She called the plant "not good, ugly."

Interestingly, both the Hesquiat Nootka (**ƛ̓a·ʔitqmapt**) and Makah ("**tcakat'kebupt**") names translate as 'crow plant' (Turner and Efrat, 1982; Gunther, 1973), and are not linguistically related to the Nitinaht term. However, Luke Swan of Manhousat gave the name "**ch'ih̲smapt**" for this plant, a form apparently related to the Nitinaht (Ellis and Turner, 1976). In all cases, it was believed that only crows eat the berries, not people (Turner and Efrat, 1982; Ellis and Turner, 1976; Fenn *et al.*, 1979). The shrub had various medicinal uses by the Makah and Nootka. Manhousat Nootka whalers drank a decoction of the bark or ate the bark fresh as a "medicine", apparently to relieve the effects of their long sexual abstenance. The Manhousat also made a "brew for the health" by boiling twinberry bark with alder bark (*Alnus rubra*) (Ellis and Turner, 1976). Makah women chewed the leaves during their confinement (Gunther, 1973). Additionally, Densmore (1939) described an unidentified shrub used by the Makah, called "**chaa'kabûp**", or 'crow plant', which is undoubtedly this species. She stated that the leaves were chewed by sick people as a strengthening tonic, and were also used to

Fig. 67 Black twinberry *(Lonicera involucrata).* (Nancy J. Turner)

predict a person's longevity. An inch-high stack of leaves was prepared, and the person was required to swallow them. If they were retained, it was said the person would live to old age, but if they were vomited, the person would not live so long (Densmore, 1939).

Sambucus racemosa L. ssp. *pubens* (A. Michx.) House var. *arborescens* (T. & G.) A. Gray (Coastal American Red Elder, or Red Elderberry) (Figure 68)

berries: **ciyay** (JT, LJ)
bush: **ciysapt** (JT, LJ)

JT was told that the berries were eaten long ago, but he himself has never eaten them, even as a youngster. LJ said that the berries were pounded and dried in rectangular wooden frames, in a similar manner to salal berries (*Gaultheria shallon*). For eating, they were soaked in water until they were of a jam-like consistency, then mixed with sugar. She did not believe they were cooked*, and said that they must have tasted very good, but even she did not remember actually eating them; her information came only from her elders.

JT said that the pithy branches were hollowed out and often used in making special ceremonial wolf-whistles, called **ʕi·tqiy̓k** (a Nootka word; cf. Nootka **ʕi·qa·** 'to whistle') (JT). The whistles were split at one end and a reed of a section of bitter cherry bark (*Prunus emarginata*), scraped very thin, was inserted. The whistle was considered sacred and was used only by wolf dancers belonging to a special society. The whistle was tied close to the dancer's mouth so that he could lean over and pop it into his mouth for use when required. TJ said that long ago a wolf dancer swallowed one of these whistles and choked to death and, after that, the whistles have always been worn on a string.

The bark and roots were made into a strong purgative, taken by young initiates, male or female, at the onset of puberty, when they were training to become adults, to cleanse their systems (JT). This

* Gunther (1973), however, noted that the Makah always steamed them, then stored them in a cool place for winter. Cooking the berries is recommended (see later discussion on poisonous qualities of *Sambucus*).

Fig. 68 Red elderberry *(Sambucus racemosa* ssp. *pubens).* (Robert D. Turner)

"medicine" was made by placing a couple of handfuls of elderberry roots, or bark scrapings, into a large (i.e., about "three quart") pot. Boiling water was poured over the mixture, and the infusion was left until it became brownish. JT noted that the longer the infusion was left standing, the stronger it would become. He said that even a dose of only one tablespoonful of the solution after it had been standing for a day was enough to make one vomit and empty one's bowels, and added that when he was around 14 years old, he and the other young people were given doses of about two cupfuls.

Elderberry roots, stems, and leaves are known to be toxic, as evidenced by the following quotation from Kingsbury (1964):

> "The plant [*Sambucus* spp.] contains substances which are purgative if taken in moderate amount. Animals avoid elder, and thus poisoning is rare. The root, perhaps, is the most poisonous part, and may be responsible for mortality in hogs. Under unusual circumstances, the foliage or young growth may be ingested by cattle with harmful effects. Accidents involving children have occurred, either from ingestion of the roots or from using the stems of this or another species for blow-guns. The fresh berries used for various purposes by some persons appear the least toxic part of the plant and harmless when cooked. Uncooked berries may, nevertheless, produce nausea."

Hence, it is not advisable, except only for the most experienced, to use elderberry plants medicinally, or even for making children's whistles or "pea-shooters". Furthermore, at least in the case of red elderberries, the fruits should be cooked before being eaten.

Nevertheless, elderberry was widely used as a purgative, laxative, and emetic by Northwest Coast peoples (cf. Turner, 1973). The Makah and various Nootka groups used it in a manner similar to the Nitinaht (Densmore, 1939; Turner and Efrat, 1982; Fenn *et al.*, 1979). In addition, the Hesquiat Nootka rubbed the roots on the skin to relieve tired, aching muscles, and the Ahousat rubbed them over the bodies of newborn babies to make them strong (Turner and Efrat, 1982; Fenn *et al.*, 1979). The Makah used an infusion of the roots as a hair wash and placed the pounded leaves as a poultice on an abscess or boil (Densmore, 1939; Gunther, 1973). They also used a decoction of the bark to counteract an evil charm, and, surprisingly, used this decoction as an antidote for poisoning; it apparently caused the patient to vomit and expell the poison (Densmore, 1939). LJ noted that a Nitinaht person who had a nervous breakdown was rubbed with a mixture of elderberry bark and black twinberry bark (*Lonicera involucrata*).

The Hesquiat Nootka names for elderberries and elder bush respectively are **ci·yin**, and **ċi·ɬ·pt** (the last also Manhousat) (Turner and Efrat, 1982; Ellis and Turner, 1976). These forms, at least the first, are related to the Nitinaht. The Makah names, "**tciki'a**" and "**tciki'asibûp**" (Densmore, 1939; cf. also "**tsikĭ''e**", given by Gunther, 1973), also appear to be linguistically related.

Symphoricarpos albus (L.) S.F. Blake (Common Snowberry, or Waxberry)

ċiɬsqapt (lit. 'owl plant'); *or* **ʔiʔisaχsapt** (lit. 'white things on the plant'—a descriptive name) (both terms LJ only)

IJ, CJ, and JT recognized this shrub, and stated that it was common around Victoria, but not around the Nitinaht or Port Renfrew area. They did not remember any name for it, although IJ mentioned that she had heard somewhere that a "tea" made by boiling the branches, leaves and berries, could be drunk by one suffering from bad headaches accompanied by dizzy spells. The dosage was about a tablespoonful once a day. This was not a Nitinaht use, however, but one from somewhere in the United States. IJ noted that the berries always stay white and that they should not be eaten.

LJ knew the plant well and told of a number of uses for it. The bark was scraped off and steeped in water, and the solution was drunk by a person who was unable to pass his water (i.e., to urinate). Densmore (1939) stated that the leaves were chewed by the Makah for the same affliction. The bark was also soaked and rubbed in water, which was then used as a wash on the skin to protect one and to keep him from straying too far from the truth (LJ). The Makah attributed further protective powers to the plant. Chewing of the leaves and swallowing them was said to counteract an evil charm, such as a spell cast on a person by an evil Indian doctor. If he wants to kill a person, he throws something into the person's body, and this medicine will counteract the effect (Densmore, 1939). Additionally, LJ said that players of the game lehal used to rub the berries of this plant on their faces and this was said to prevent people from guessing where the bone was hidden.

The second Nitinaht name given is said to be the "proper" one; the first is just descriptive (LJ). The Hesquiat Nootka names for the berries and bush [**ʔiskċiẖum** (lit. 'eyeball'), and **ʔiskċiẖmmapt** or **ʔiskċiẖimaqχmapt** respectively] appear to be linguistically related to the second Nitinaht name. However, the Makah name given by Densmore (1939), "**hidak'sasii**", is not. It is said to be derived from "**hidaksas**", the word used when an Indian doctor wants to kill a person (Densmore, 1939).

CORNACEAE (DOGWOOD FAMILY)

Cornus canadensis L. (Canadian Bunchberry)

ɬasƚa·č (lit. 'bright crotch'; cf. Nootka **ɬastak** 'bright-coloured') (name said to be borrowed from Nootka—see discussion) (JT)

The Nitinaht, like the Nootka and Makah (Turner and Efrat, 1982; Fenn *et al.*, 1979; Ellis and Turner, 1976; Gunther, 1973), ate the berries fresh and raw. JT used to see people eating the berries right from the plants. However, he said, they are sort of porous and spongy, and do not have much flavour. He noted that there were many of these berries on the old trail between Whyac and Clo-oose, an observation borne out during our field trip there. IJ stated that, although the berries were edible, she was told when she was young not to eat them or she would have all girls when she started having babies. However, she told us with a smile that she did eat them when no one was looking and she had no trouble having boy babies as well as girls.

JT did not seem to know the significance of the suggested derivation of the name from Nootka, nor of the meaning of the name "bright crotch". Nevertheless, this information does fit in with the Nootka name and traditional beliefs about the plant. The Hesquiat and Manhousat names are the same: **hasƚa·či** (applying to the berries; the plant is **hasƚa·čiqmapt**) (Turner and Efrat, 1982; Ellis and Turner, 1976). Both of these groups have a traditional story relating to the origin of the plant from the menstrual blood of a woman who was stranded at the top of a tall cedar tree by her jealous husband. While she was up the tree she had her "monthly", and the blood ran down the trunk and where it touched the ground, the bunchberry plant grew. In the Hesquiat version, she told her brother who came to rescue her: "Don't be afraid. You can eat this [berry]. I made it. It is good to eat. It will always grow around that [cedar] tree." (Turner and Efrat, 1982; Ellis and Turner, 1976). The Makah name, "**bûbûkwak!tibupt**", said to mean "berries with pebbles in them" (Gunther, 1973), is not related to the Nootka or Nitinaht names for this plant, although it is with the Hesquiat name for *Viburnum edule*, **ƚuƚuk̓·aqχmapt** (Turner and Efrat, 1982; see Appendix 2).

Cornus stolonifera Michx. var *occidentalis* (T. & G.) C. L. Hitchc. (Western Red-osier Dogwood)

There appeared to be some confusion between this shrub and kinnikinnick (*Arctostaphylos uva-ursi*) among our Nitinaht consultants. IJ, when shown *Cornus stolonifera*, seemed uncertain about it and wondered if it grew in the Nitinaht area. When told that it did, she seemed to recognize it and said that the berries were edible and were eaten fresh. MT recognized the shrub, but called it **bu·bu-k̓ʷq̓ʌ̓apt** (lit. 'burned-centres plant'), the name applied by IJ and LJ to kinnikinnick. MT said that the berries were not eaten—that they were poisonous—and that the wood was not used for anything. MT may simply have been mistaken in her application of the name, 'burned-centres plant' to this *Cornus* species, or, possibly, the name may be used for both species. The name seems to relate to the use of kinnikinnick for smoking, as a tobacco (see *Arctostaphylos uva-ursi*). It seems more than a coincidence that red-osier dogwood, too, was used in smoking mixtures by many North American groups. In fact, some Indian people, especially Plains inhabitants, actually refer to it as "kinnikinnick" (Hart, 1976)*. However, none of the Nitinaht consultants had heard of it being smoked although all recalled that *Arctostaphylos* was. It is unlikely that the bitter-tasting berries were eaten by the Nitinaht because they are not known to be eaten by other Northwest Coast groups (Turner, 1975). They were, however, eaten by some Interior peoples (Turner, 1978).

This plant was apparently little used by either Nootka or Makah. It is not mentioned for the latter group by Gunther (1973) or Densmore (1939), and seemed to be confused with Hooker's willow (*Salix hookeriana*) by some Hesquiat elders, who called it **ƛɬɬc̓smapt** (lit. 'dog plant'), a term later applied to the willow (Turner and Efrat, 1982). George Louie of Ahousat said that the roots were used to dye "grass" for baskets (Fenn *et al.*, 1979).

ELAEAGNACEAE (OLEASTER FAMILY)

Shepherdia canadensis (L.) Nutt. (Soopolallie, or Soapberry)

berries: **χu·sim** (borr. fr. Coast Salish) (JT)

bush: **χu·simapt** (JT)

Although JT gave the name for the soapberry bush, he noted that the plants did not actually grow in Nitinaht territory. He recognized that the name was borrowed from Salish—either Straits (at Sooke), Halkomelem (Cowichan), or possibly Comox. He said that within his own memory, the berries were bought canned (in jars) rather than fresh, but he did not know where they were obtained. He noted that there are many soapberry bushes along the highway between Parksville and Alberni. The berries, a well-known source of the whipped confection called "Indian ice-cream", were prepared by the Nitinaht in much the same way as by other groups, by whipping them with a small quantity of water in a grease-free container (JT). They were served at large gatherings and feasts (JT—see also Turner, 1975, 1978, 1981).

The Nitinaht name for soapberries is almost certainly derived directly from a Salish form, rather than being borrowed from either Makah or Nootka. The Manhousat and Hesquiat Nootka names, both **muχʷaƛ̓kin** (Turner and Efrat, 1982; Ellis and Turner, 1976), appear to be closer to the Southern Kwakiutl (Kwakwala) form, **neɫʷeskén** (Turner and Bell, 1973) than to Nitinaht. The Makah name is given by Gunther (1973) as "**patsáp'ats**". The Salishan forms include: Halkomelem (Cowichan dialect) and Straits (Saanich)—**sχʷ'esɔm**; and Comox—**χʷ'usum****(Thompson *et al.*, 1974; Turner and Bell, 1971; R. Bouchard, pers. comm.). All of these terms apparently apply both to the berries and to the whipped confection made from them. Neither the Nootka, Makah, nor the Southern Kwakiutl had direct access to the berries; all of them, like the Nitinaht, obtained them through trade (Turner and Efrat, 1982; Ellis and Turner, 1976; Gunther, 1973; Turner and Bell, 1973).

* The word, "kinnikinnick" is said to be derived from an Algonkian term meaning "that which is mixed", and refers to its use as a smoking mixture. However, it has come to apply specifically to *Arctostaphylos uva-ursi*, one of the most common ingredients in smoking mixtures (Hart, 1976).

** Because of the similar initial vowel sound in the Nitinaht and Comox terms, it is likely that the latter is the language of origin for the Nitinaht name.

ERICACEAE (HEATH FAMILY)

Arbutus menziesii Pursh (Pacific Madrone, or Arbutus)

ɣu·ʔuǩʷaʔχapt (lit. 'descendant from a changeable plant'; cf. **ɣuʔa·** 'change') (JT)

The Nitinaht name is derived from the characteristic peeling off of the bark of this tree, leaving a "new skin" underneath (JT). JT said that Nitinaht people were scared to touch the tree, because, doing so might cause their luck to "peel off" like the bark. He noted that the leaves have a waxy coating on them and recalled that the Cowichan Salish people chew the leaves and swallow the juice for a sore throat. [This use has been recorded for the Straits (Saanich) (Turner and Bell, 1971.] The Nitinaht name for arbutus appears to be unique to the language; no name is given for Makah by Gunther (1973) or Densmore (1939), and the Hesquiat Nootka name, **ƛaƛaƛtu·ɬ** (cf. Hesquiat **ƛaƛah** 'naked'*), does not seem to be linguistically related. The Coast Salish names [cf. Halkomelem (Cowichan)—**qá·nɬp** (Turner and Bell, 1971)] are also substantially different from Nitinaht.

Arctostaphylos uva-ursi (L.) Spreng. (Kinnikinnick)

bu·buǩʷqχapt (lit. 'burned-centres plant') (IJ, LJ, CJ)

There seems to be some confusion among the Nitinaht elders between this plant and red-osier dogwood (see *Cornus stolonifera* var. *occidentalis*). MT called the latter species by the same Nitinaht name. When shown a specimen of *A. uva-ursi*, she said she did not remember the name, but recalled that the leaves were smoked and that the branches were hung up to dry in bunches for this purpose. IJ, CJ, and LJ also remembered the leaves of kinnikinnick being smoked; LJ remarked that people used to "get high" on them. JT's grandfather, Thomas Klishil, used to collect the plants from the large sand dune just south of the Cheewhat River estuary. He used to roast the leaves in the oven until they were crisp, then crush them and mix them with shaves of plug tobacco, and put this mixture in his pipe for smoking (JT). One of the authors of the present study (RTO) sampled some kinnikinnick leaves, toasted near an open fire until brown and dry, in his pipe. He found them to be mild and pleasant for smoking and noticed no dizzying or soporific effects from them.

IJ stated that the fruits were formerly eaten fresh, but LJ said that they were not eaten. MT noted that grouse used to feed to them at the Cheewhat River dune. The fact that there is no specific term for the fruits in Nitinaht is an indication that they were not eaten traditionally. However, they were apparently eaten by some Nootka peoples (Fenn. *et al.*, 1979), but not by the Hesquiat (Turner and Efrat, 1982).

It is not known whether the use of kinnikinnick for smoking by the Nitinaht is aboriginal or relatively recent in origin. Both Makah and Nootka peoples smoked the leaves but, at least according to some Hesquiat people, this practice originated following the introduction of tobacco by European and American traders and that before this time, the Hesquiat did not know about smoking. Gunther (1973), however, states that the use of kinnikinnick for smoking preceded the introduction of tobacco in the western Washington area. The use of kinnikinnick for smoking in the Nitinaht area apparently ceased in the early part of this century, when the plant was replaced entirely by tobacco.

Interestingly, the Hesquiat Nootka name for kinnikinnick is polysemous with (i.e., the same word, with meaning dependent on context) the general name for "plant", **χaqapt** (Turner and Efrat, 1982). At first, JT felt that the Nitinaht form of this term, **χaqpat** (a general word for leaves or any low, herbaceous plant—see Appendix 3), might also apply at the generic level to kinnikinnick, but later said that the only real name for this plant was **bu·buǩʷqχapt** (see above). Gunther (1973) gives the Makah name for kinnikinnick as "**kwlca**".

Gaultheria shallon Pursh (Salal) (Figure 69)

fruits: **keylcapɣ** (cf. **keylck** 'blue'; lit. 'blue-coloured berries') (JT, IJ, CJ)

bush: **ɬe·pat** (JT, IJ, CJ)

Salal fruits (called berries for the purpose of this discussion) were the most important of all fruits used traditionally by the Nitinaht, as almost everywhere on the Northwest Coast (Turner, 1975). They were eaten fresh, and were dried in large quantities for winter use. IJ commented, "They really go after them!" For drying, the berries were mashed with a large, rounded piece of wood, then placed in a bowl. They were then poured into rectangular frames set out on skunk-

* JT noted that this term actually means 'naked, repeatedly', or 'somebody repeatedly taking off his clothes'

cabbage leaves (*Lysichiton americanum*), which were in turn placed on wooden frames. When first poured the berries would be about 1 cm in thickness; they were measured by the width of one's first finger (IJ). IJ recalled that even if there were lots of berries, by the time they were dry, the cakes became very thin. They were put away for winter in large, loosely woven storage baskets of cedar bark (see discussion on baskets). The baskets had enough openings in them to allow the air to circulate freely and thus prevent the berry cakes from becoming mouldy. In any case, they were checked periodically to ensure that they were not spoiling (IJ). The baskets were stored on high platforms around the house, where the air was relatively warm and dry, and the food "never gets spoiled" (IJ).

Fig. 69 Salal berries (*Gaultheria shallon*). (Nancy J. Turner)

Before the berries were to be eaten, they were soaked overnight in water, then boiled, being stirred frequently, until they were jam-like in consistency. Long ago, they were eaten with whale or seal oil. More recently, molasses was added, and even more recently, syrup or sugar was used. The same basic method was used for drying and preparing several kinds of berries, including blueberries and huckleberries (*Vaccinium* spp.) (IJ). Salal berries are still picked and eaten by some people, but are canned, frozen, or made into jam rather than being dried for storage. JT recalled that his grandmother used to pick the largest and best-tasting salal berries from the vicinity of the large sand dune just south of the Cheewhat River. This dune was called **wič̓qaqtʔɬs** (lit. 'cleared space between') (JT). Arima (1975-76) notes that the month of August is called "**k'aʔɬ:tsapaxpɬ**" after salal berries.

IJ stated that salal leaves could be chewed, like deer fern fronds (*Blechnum spicant*), to alleviate hunger when one is lost in the woods. Additionally, the branches, with leaves attached, were used in steam-cooking, both in the traditional pits and in stovetop, kettle steaming (see *Camassia* spp., p. 83). The branches were placed at the bottom of the pit or kettle—immediately over the red-hot rocks or, in the case of the kettle, over the dried grass. They were covered by a layer of fern fronds, followed by alternating layers of the food to be cooked (e.g., camas bulbs, cinquefoil roots or clover

rhizomes) and fern fronds, and, finally, at the top of the pit or kettle, another thick layer of salal branches was placed. They served to flavour the food being cooked, kept the food from burning, and made sufficient air space in the pit or kettle to allow the steam to circulate freely. During the cooking process, the leaves are themselves cooked, and turn from bright-green to brownish-green when the cooking is completed. We can verify, from our own steam-cooking experiences, that the salal leaves do impart a pleasant flavour and fragrance to edible roots being cooked.

The Hesquiat Nootka also used the leaves in steam-cooking, to flavour the food and prevent it from cooking (Turner and Efrat, 1982). George Louie of Ahousat noted that they were placed on top of fish and sea anemones being smoked to give them a good flavour. He also said that the leaves could be eaten if one was lost in the woods (Fenn *et al.*, 1979). Additionally, some Nootka dancers ate salal leaves to insure a good performance, to keep from being "ashamed". They were also considered to be good for the blood and for overall health (Fenn *et al.*, 1979).

JT stated that salal leaves were formerly used to make a greenish-yellow pigment. The very young, light-green leaves were crushed, then mixed with salmon roe, and this was painted directly onto masks and other wooden items to make designs. The greenish-yellow colouring yielded by salal leaves is called **ʕubaqk**. JT knew of no other plants that would give this colour. Sometimes a dye of the same colour was produced by steeping the leaves in water, just as one would make tea, and then soaking the material to be coloured, such as basket "grass" (see *Carex obnupta* and *Xerophyllum tenax*), in this solution for a couple of days until the colour had transferred onto the "grass" (JT).

According to Arima (1975-76), seal bladder floats used in halibut fishing had a hollowed out tube of salal inserted in them to inflate them. However, the dimensions of the salal branch used are suggested as 5 cm (2 in.) in diameter and 10 cm (4 in.) long, which would be unusually thick for this species. After inflation, the tube was stopped up with a soft wood, like cedar or salal. Possibly, it was not salal, but elderberry that was used as the tube. The latter has a central core of pith that is easily hollowed out, and was used for whistles (see *Sambucus racemosa*).

Ṡalal leaves were taken by a husband and wife who wanted their firstborn baby to be a boy. JT explained that, traditionally, especially in higher class families, it is preferred that the firstborn is a son, so that he could carry on the heritage for the family. Hence, when they were first married, the man and wife would each eat four of the largest salal leaves they could find. Because the leaves are evergreen, this could be done at any time of the year—whenever the marriage took place (JT).

The Nitinaht name for salal berries, **keyicapɨ**, appears to be unique to this language. As JT pointed out, the Nootka name is **ẏaaḥa** (cf. also Turner and Efrat, 1982; Ellis and Turner, 1976). However, the Nootka name for the leaves (cf. Hesquiat—**ɬayi·pt**) is related to the Nitinaht term for the plant. (In Hesquiat, the name for the whole plant is derived either from the berry name, as **ẏaḥapt**, or from the leaf name, as **ɬayipqmapt**, depending on whether the bush is fruiting or not—Turner and Efrat, 1982.) The Manhousat name for the plant is "**lhaayiḷkmapt**" (Ellis and Turner, 1976). Neither Gunther (1973) nor Densmore (1939) gives a name for salal berries, but their names for the salal bush (cf. "**sala'xbupt**"—Gunther, 1973, and "**salal'abup**"—Densmore 1939) are obviously related in some way to the vernacular name, "salal". Possibly, it is from the Makah language that the common name for this plant originated, or, because it is known to have been used in Chinook Jargon (Avis *et al.*, 1967), it may have been borrowed from this trade language by the Makah, replacing their original name for the berries. Avis *et al.* (1967) state that the word entered Chinook Jargon from the Chinook Indian language, in which the salal plant was named "**klkwu-shala**".

Ledum groenlandicum Oeder (Common Labrador-tea)

tɬ·, *or* **tɬ·pat** (borr. fr. English "tea") (IJ, MT)

This plant was well known as a source of tea to the Nitinaht, but none of the elders consulted knew of any name for it, other than those listed above, which are derived from English. IJ recalled that it was found around lakes in the Nitinat area. (We found a very small patch of it at Whyac Lake.) It was gathered and used fresh or dried to make tea; IJ remarked, "That was the best tea I ever taste." She noted that it was easy to identify because of the yellowish fuzz underneath the leaves. When she was shown a photograph of the bushes in flower, however, she said these were not the right plants because the **tɬ·** plant had no flowers. MT recalled that her father and her grandmother always had some on hand. As well as being taken as a hot beverage, this tea was drunk as a tonic by people who

were "run down" or lacked an appetite. However, JT warned that drinking too much can make one fat. He said that when he was a boy, there was only one man at Clo-oose who was overweight. He had a large pot-belly and JT attributes this to his having been fed too much Labrador-tea as a child.

The Nootka name for Labrador-tea is also derived from the English word for tea (cf. Hesquiat and Manhousat—**ti·mapt**) (Turner and Efrat, 1982; Ellis and Turner, 1976). The Makah name, according to Gunther (1973) is "**bûpesbupt**", the same as the name for bog cranberry (*Vaccinium oxycoccos*), because these plants always grow together.

The Nootka and Makah also used this "tea" as a medicine. George Louie of Ahousat stated that it was administered for tuberculosis and for women who miscarried (Fenn *et al.*, 1979). The Makah took it as a blood purifier (Gunther, 1973).

Menziesia ferruginea J. E. Smith (False-azalea, or Pacific Menziesia)

None of the Nitinaht elders consulted could remember the real name for this shrub. However, JT called it by the descriptive name of **ʔa·ʔaƛaqapt** (lit. 'two-pronged plant'), and LJ knew which shrub he was talking about when he used this name. When JT was young, he used the evenly forked branches to make sling-shots, apparently a relatively recent use.

The bark was attributed special powers for warding off evil spells (LJ). If an evil Indian doctor wanted to make a person sick, or even kill him, he would "shoot" bones into the person, and *Menziesia* bark was taken to counteract this action. LJ said that it affects one in a similar manner to *Lycopodium selago*, causing vomiting and dizziness. Apparently the Makah used common snowberry (*Symphoricarpos albus*) in a similar way (Densmore, 1939—see under *Symphoricarpos*). Densmore (1939) stated that the twigs of *Menziesia* were woven into a matting together with cedar bark, and that this matting was used to cover canoes, to prevent their cracking in the sun. Neither she nor Gunther (1973) gave a Makah name for the plant. The Hesquiat Nootka name, **ʕacʕanixsmapt** was not recognized by the Nitinaht consultants.

Vaccinium alaskaense T. J. Howell (Alaska Blueberry)

berries: **bi·šapχ** (IJ, CJ, JT)

plant: **bi·šapχapt** (IJ, CJ, JT)

The berries were differentiated from those of the oval-leaved blueberry (*V. ovalifolium*) by their dark, "pretty near black" colouring, compared with the "grey" colouring of *V. ovalifolium* berries (IJ). Both species were said to occur sporadically in the Whyac and Clo-oose areas but IJ stated that, within her lifetime, they were far more prevalent in the Port Renfrew area because this was the first area to be logged and these species grow well in logged-over clearings. People coming home to Whyac and Clo-oose after a trip to Port Renfrew would bring baskets of berries, including the "blueberries" (*V. alaskaense*), "grey" blueberries (*V. ovalifolium*), and red huckleberries (*V. parvifolium*), back with them in their boat or canoe. While they were still a long way from shore they would start "hollering", mentioning the name of the kind of berry they had and, by the time they arrived at the beach, everyone in the village would be there to meet them, and an impromptu feast would be held with whatever food was brought. The same was done for green sea-urchins, which are not found in the waters around Whyac and Clo-oose (IJ).

IJ noted that the bushes of this blueberry were fairly large and might reach a height of 2 m or so (6 to 7 ft.) in a bushy place. She said the berries ripen in July, just after salmonberries (*Rubus spectabilis*), and that the best ones are found down near the beach. The berries were eaten fresh, or were mashed and dried for winter like salal berries (*Gaultheria shallon*). The berries were considered less sweet than those of *V. ovalifolium* (IJ, JT).

No Makah name was given for this species by Gunther (1973) or Densmore (1939). The Hesquiat and Manhousat Nootka names for the berries and bush (**situp**, and **situpmapt**, or **sitmapt**—Turner and Efrat, 1982; Ellis and Turner, 1976) are not related linguistically to the Nitinaht.

Vaccinium myrtilloides Michx. (Velvet-leaved Blueberry, or "Fraser Valley" Blueberry), including cultivated forms

bo·ɬsʔd (IJ, JT)

With one possible exception, this species is not found in the Nitinaht area. Nitinaht people used to pick the berries in the Fraser Valley. IJ once worked at the canneries along the Fraser River (at

Steveston) and recalled that they used to walk along the railroad tracks to get to a large patch of these berries. She said they were large and juicy, and grew in clusters, like *V. ovatum* berries (evergreen huckleberries). Nowadays, the name **bo·ísi?d** is applied to the blueberries one might buy in grocery stores, although formerly, the name, **ʔíca·pχ** (see *V. ovalifolium*) was used for blueberries purchased in a store (IJ, JT).

There is one report of this species occurring in Nitinaht territory. IJ's late cousin, Ada Jack, told IJ that she had seen "lots" of these blueberries around the third lake shoreward (i.e., west) from Hobarton Lake. (Apparently, this is the small, elongated lake southwest of Squalicum Lake and southeast of Tsusiat Lake.) Ada Jack's father was a canoe builder and she used to go with him to the vicinity of Tsusiat Lake in search of good canoe trees (see *Thuja plicata*—western red cedar). Ada Jack was the only person IJ ever heard talking about this particular patch of **bo·ísi?d** plants. Another cousin of IJ's, Henry Tait, walked from Hobarton Lake to Tsusiat Lake with a surveyor and did not mention having seen any of these berries. IJ remarked that possibly the berries were not ripe at the time of his trip. Another possibility is that the berries encountered by Ada Jack were actually the "grey-blue" form of evergreen huckleberries (*V. ovatum*), which were mistaken for **bo·ísi?d** by JT on one occasion.

JT felt that the name **bo·ísi?d** was borrowed from Halkomelem Salish. If so, it is possibly a modified form of the Halkomelem name, **máy?səm** (Cowichan), or "**mólsem**" (Upriver) for what is reported to be the berries of bog blueberry (*Vaccinium uliginosum* L.) (Turner and Bell, 1971; Brent Galloway, pers. comm., 1979). Galloway gave the name "**lhewqí:m**" for the berries of *V. myrtilloides*, and correctly noted that these berries grow in clusters, whereas those of *V. uliginosum* grown singly. If IJ is correct in her observation that **bo·ísi?d** berries grow in clusters, then the name must refer to *V. myrtilloides*. The Hesquiat Nootka gave two names for the "Fraser Valley blueberry". The first, **ʔícx̣ʷapi·ƛ̓** (cf. Hesquiat **ʔícxumɬ** 'white') was given as a Hesquiat term; the second, **mu·nisaq**, was said to be used by the Ahousat or Ucluelet Nootka and was undoubtedly derived from Halkomelem "**mólsəm**" (Turner and Efrat, 1982).

Vaccinium ovalifolium J. E. Smith (Oval-leaved Blueberry)

berries: **ʔíca·pχ** (cf. **ʔícx̣ʷak** 'faded/grey colour', and **-apχ** 'berry'; lit. 'faded/grey berry') (JT, IJ)
plant: **ʔíca·pχapɬ** (JT, IJ)

The berries of this plant are said to ripen about the same time as those of Alaska Blueberry (*V. alaskaense*), namely in July, just after the salmonberries ripen (IJ). They are preferred to Alaska blueberries because they are sweeter. Aside from taste, the best way to differentiate between these two blueberries is that the berries of *V. ovalifolium* are greyish, having a waxy "bloom" on the outside of the fruit, whereas those of *V. alaskaense* are darker (IJ). Both types were eaten fresh and were formerly mashed and dried for winter, like salal berries (*Gaultheria shallon*) (IJ). Both could be found in the Nitinaht area but were said to be even more common at Port Renfrew, at least in the early part of this century (see under *V. alaskaense*).

The Hesquiat Nootka name for *V. ovalifolium* berries, **ʔícx̣ʷa·nuš** (lit. 'whitish') (Turner and Efrat, 1982), is related to the Nitinaht form. Gunther (1973) gives the Makah name as "**xōxōyak**", apparently in no way related linguistically to the Nitinaht and Nootka forms. The berries were eaten, fresh or dried, by all of these groups.

Vaccinium ovatum Pursh (Evergreen Huckleberry, or Winter Huckleberry) (Figure 70)

berries: **sidbux̣ʷsiy̓c** (IJ, JT)
plant: **sidbux̣ʷsiy̓capɬ** (IJ, JT)

IJ called the berries "winter blueberries". She said that there were only a very few places in the Nitinat Lake area where one could get them—"just small spots of it here and there." The best locality to pick the berries, she noted, is on the flat pine woods just south of Jordan River along the Sooke Highway. She said they start to ripen in September but people usually waited until October or November, when all of the berries are ripe, because it is difficult to pick only a few berries in a cluster when some are still green. The berries were picked off by the cluster, and any stems and leaves that got mixed in with the berries were sorted out later, at home. JT said that the berries continue to ripen until they freeze and said that, even after they were frozen, they could be picked; they taste even

Fig. 70 Evergreen huckleberry *(Vaccinium ovatum).* (Nancy J. Turner)

better after being exposed to the first frost. IJ said the berries are so sweet one does not need to add sugar to them. Nowadays, she keeps some in her freezer. She said they are excellent in pies, a fact we can attest to.

There are two colour forms for the fruit: shiny black, and glaucous blue. The latter, described as var. *saporosum* Jeps., is said to be better flavoured (Szczawinski, 1962), but we were unable to distinguish between the two forms in terms of flavour. Both forms are common in the patch south of Jordan River but JT had never noticed the glaucous blue form before and wondered if it might be the Fraser River blueberry, **bo·isʔd** (see *V. myrtilloides*).

The Nitinaht names for the berries and plant of this species are cognate with the Hesquiat and Manhousat names (cf. Hesquiat: **si·namuxsʔic** and Manhousat "**siinimixs7its**" —berries, and Hesquiat **si·namuxsʔicmapt**—plant) (Turner and Efrat, 1982; Ellis and Turner, 1976). No Makah name was reported by Gunther (1973) or Densmore (1939).

Vaccinium oxycoccos L. (Bog Cranberry)

berries: **ƛəƛeʔs** (IJ)

plant: **ƛəƛeʔsapt** (IJ)

This plant grows in sphagnum bogs, such as that around the edge of Whyac Lake. The Nitinaht used to pick the berries in the fall and eat them (IJ), but IJ did not recall whether they were eaten with oil or were cooked, or how they were stored. The Hesquiat and other Nootka groups used to eat them, as did almost all Northwest Coast groups (Turner, 1975). The Hesquiat formerly poured oil over them, but more recently cooked them with sugar and made them into jam or jelly, or simply stored them in jars with water (Turner and Efrat, 1982). They are still used today, and are prepared in a manner similar to the commercial cranberries (IJ; Fenn *et al.*, 1979). Both the Nootka (cf. Hesquiat **ƛəƛaʔis** and Manhousat "**p'ap'a7̲is**") and Makah ("**pap'es**") names for bog cranberries are cognate with the Nitinaht term (Turner and Efrat, 1982; Ellis and Turner, 1976; Gunther, 1973).

Vaccinium parvifolium J. E. Smith (Red Huckleberry)

berries: **ƛɬɨχapχ** (IJ, JT)

bush: **ƛɬɨχapχapt** (IJ, JT)

The Nitinaht considered this berry to be closely related to the Alaska and oval-leaved blueberries (see *V. alaskaense* and *V. ovalifolium*), and the three types were usually spoken of

together (IJ, JT). Like the blueberries, red huckleberries were said to ripen in July, just after salmonberries ripened (JT). They were eaten fresh or mashed and dried in cakes for winter, like salal berries (see *Gaultheria shallon*). For use, the dried berry cakes were soaked overnight, then boiled and served with oil and molasses, or syrup (IJ). Nowadays, IJ likes to freeze them.

When the Port Renfrew area was first logged, huckleberries and blueberries became very common in the logged-over clearings and the people from Clo-oose and Whyac used to bring berries from there to share with the others of the village (see *V. alaskaense*) (IJ). The month of June is called "**tl'ɬapaXpɬ**" after red huckleberries (Arima, 1975-76).

The Nootka names for the fruit and bush of red huckleberry [cf. Hesquiat **his^{2}inwa** and **his^{2}ɬtqmapt**, and Manhousat "**his7inɬwa**"] are not related to Nitinaht (Turner and Efrat, 1982; Ellis and Turner, 1976)], and neither is the Makah name, "**xixɬ·ad**" (Gunther, 1973).

FABACEAE, OR LEGUMINOSAE (PEA FAMILY)

Cytisus scoparius (L.) Link (Scotch Broom)

čičikinaχs (lit. 'chickens on the bushes'; borr. fr. English, "chickens") (IJ, JT)

IJ and JT recognized this weedy shrub as an introduced plant and remarked that it is very common along the Sooke highway. The name appears to be related to the Hesquiat term applied to the flowering plants of *Vicia gigantea*—giant vetch, and *Lathyrus japonicus*—sea pea, **čik^{2}ɬaqmapt** (Turner and Efrat, 1982). Although these plants were called "chickentail plant" by at least one Hesquiat speaker, the name **čik^{2}ɬaqmapt** was translated as 'sparrow plant', said to be derived from **čikɬa** 'sparrow'* (Turner and Efrat, 1982). In view of the similar form in Nitinaht for Scotch broom, a plant with flowers similar to those of *Lathyrus* and *Vicia*, it may be that the Hesquiat translation is a folk etymology and that the Hesquiat term should also translate as "chicken plant".

Trifolium wormskioldii Lehm.** (Wild Clover, or Springbank Clover) (Figure 71)

small-leaved variety: **naxu·** (IJ, CJ, LJ, JT)

large-leaved variety: **ʕeʕciƛ̓** (IJ, CJ, LJ, JT)

The rhizomes of this species were eaten by the Nitinaht, as they were by the Makah, Nootka and virtually all Coastal Indian peoples in British Columbia (Edwards, 1979; Turner, 1975). However, unlike other Northwest Coast peoples—at least within the experience of the first author (NJT)—the Nitinaht recognized two distinct forms of edible wild clover, as indicated by the names above. It seems that none of the Nitinaht people living today can really distinguish between the two types, although, as indicated, the variety called **naxu·** had slightly smaller leaves than the **ʕeʕciƛ̓** variety, and the rhizomes of the latter were said to be a creamy colour, in contrast to the pure white rhizomes of the **naxu·** form (IJ). Both types were said to grow together and, apparently, they tasted about the same; neither was preferred over the other (IJ).

There is no indication in the botanical literature (cf. Hitchcock *et al.*, 1955–1969; Taylor, 1974; Taylor and MacBryde, 1977; Gillett, 1980) of the recognition of two forms of this species. During this research project, *T. wormskioldii* was collected from several locations and the plants did seem to be divisible into small-leaved and large-leaved forms. Additionally, the small-leaved plants did seem to have smaller, slenderer rhizomes, but whether this differentiation is statistically significant remains to be determined. John M. Gillett (pers. comm.), taxonomist and *Trifolium* researcher at the National Herbarium of Canada, noted that there is a coastal race of *T. wormskioldii* which has larger flower heads and more purple flowers but did not feel this race warranted taxonomic recognition. He noted that throughout the very broad range of the species there are many local variants, with narrow leaflets, smaller heads, and paler flowers, but that the documentation of such variation would require further study and much additional field work. The chromosome counts of all of the coastal representatives of the species are tetraploid.

The long, whitish rhizomes of *T. wormskioldii* resemble superficially strands of spaghetti, but are slightly thinner and sometimes branched. They were dug in the fall, at the same time as cinquefoil roots (*Potentilla pacifica*), and were prepared and eaten in much the same way. The three types of "roots"—**naxu·**, **ʕeʕciƛ̓**, and **ʔicsap** (*Potentilla*)—are often talked about together. When

* The Nitinaht name for sparrow (and any other small bird) is **ƛ̓aʔ^{w}ida·ʔɬ** (JT).

** Also commonly spelled *T. wormskjoldii*, but this spelling is incorrect, according to Gillett (1980).

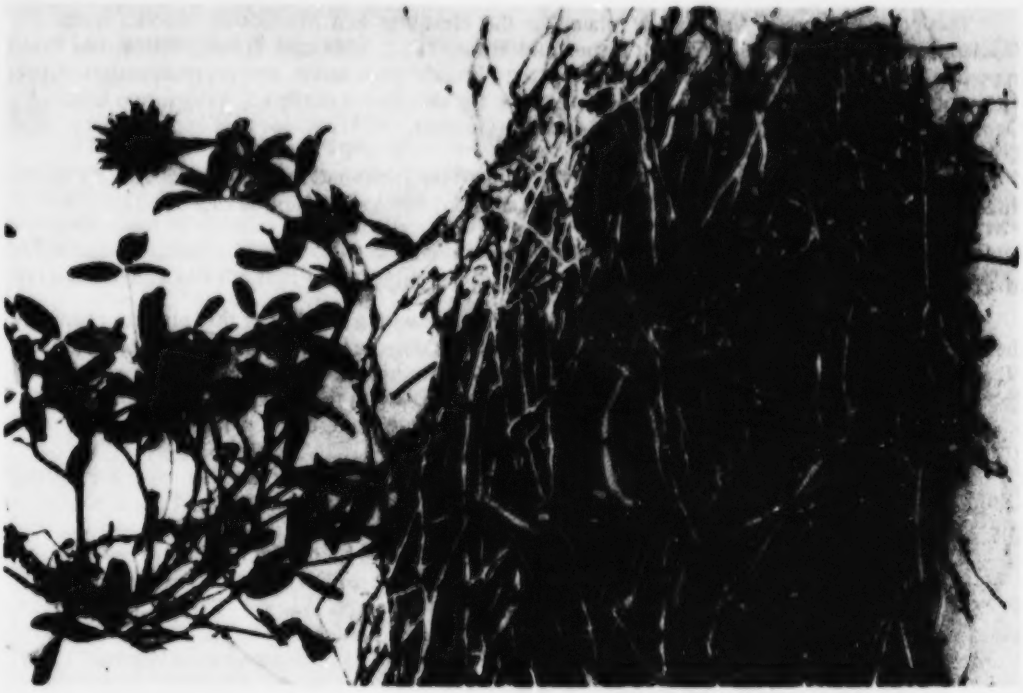

Fig. 71 Wild clover *(Trifolium wormskioldii)* showing edible rhizomes. (Nancy J. Turner)

The rhizomes are ready for digging after the plants have started to turn yellowish and die down. This is around the end of October. After being dug, traditionally with a pointed digging-stick of yew, the rhizomes were washed and tied together in fist-sized bundles, using one of the longer rhizomes as a tie. Each woman would tie her bundles with a special knot so that she would be able to recognize them after they had been cooked. Cooking was done in a communal steaming-pit or, if there was only a small quantity, in a stovetop kettle. Cooking techniques are further described in the discussion on Plant Foods (p. 18). Clover rhizomes could be cooked in the same pit or container with cinquefoil roots and camas bulbs (*Camassia* spp.) but not with bracken fern rhizomes (*Pteridium aquilinum*) which required a larger size of red-hot cooking rocks or longer cooking time (JT, IJ). The cooked rhizomes were cooled and eaten immediately, or dried and stored for winter. The dried roots were placed in large, loosely woven storage baskets of red cedar bark and were interspersed with layers of clean, dried grass to prevent them from becoming damp and mouldy. Before being eaten, they were re-steamed for a short time. The rhizomes were generally dipped in oil as a dressing. Traditionally, this would be whale or seal oil or, more recently, vegetable oil might be used (IJ). The rhizomes are very sweet (IJ) and, in our own experience, they are very palatable, having a flavour somewhat reminiscent of beansprouts or raw peas.

IJ recalled that the people at Whyac, and possibly those from Clo-oose as well, used to obtain clover rhizomes from the sandy beach along the north shore of Nitinat Lake, near the site of Nitinat village. Both varieties of rhizomes grew there (IJ). We found some plants growing amongst the dense patches of Pacific cinquefoil along the Cheewhat River but IJ could not remember whether clover rhizomes, or even cinquefoil roots were dug from this area. Another location where wild clover grows abundantly is along the southeastern shore of Nitinat Lake at the site of the present MacMillan Bloedel campground. However, IJ noted that the beach there is very rocky and this makes the rhizomes crooked and bumpy, rather than straight as they are in sandy soil. Wild clover—especially the **naxu·** variety—is also quite common along the tidal zone of the San Juan River and Port Renfrew. It can also be found at Botanical Beach. A specimen from there was called ʕeʕcl̓ɣ by IJ.

The Nitinaht name, **ʕeʕciy̓**, is related to the Hesquiat and Manhousat Nootka name for *T. wormskioldii* rhizomes, **ʕaʕiːc̓u** (Turner and Efrat, 1982; Ellis and Turner, 1976), but there appears to be no comparable Nootka form for the Nitinaht term **naxu·** and no recognition of two different varieties of wild clover. The Makah name for this clover (called *T. fimbriatum* Lindl. by Densmore, 1939 and Gunther, 1973) is "**kɬôxtap**" (Gunther, 1973) and does not appear to be related to either Nitinaht term.

The general use of *T. wormskioldii* on the Northwest Coast and the nutritional content of the rhizomes are described elsewhere (Turner and Kuhnlein, 1982; Kuhnlein *et al.*, 1982).

Vicia gigantea Hook. (Giant Vetch) (Figure 72)

ki·ki·ɬi·kseyḱaḵ̓kʷapt (lit. 'resembling-quiver plant') (CJ, JT)

Nitinaht fishermen used to rub their nettle-fibre lines with a handful of this plant to eliminate the human odour from the lines. This had the effect of staining the lines green, as recalled by CJ and JT. The fishermen would also rub their hands with the plant before they touched their fishing gear. They would also take a bundle of giant vetch in their canoes with them, so that they would always have ready access to it when they needed it (JT). Stinging nettle plants (*Urtica dioica*) were also used to rub on fishing lines (JT).

The pea-like seeds of the vetch were not eaten (JT) although some Nootka people apparently did eat them (Fenn *et al.*, 1979). The Makah used the leaves to flavour salmonberry sprouts in steaming pits (Densmore, 1939). Makah girls pounded the roots and rubbed them on their bodies to attract the boys (Densmore, 1939), and the roots were also used to make a hair wash (Gunther, 1973).

The Nitinaht name alludes to the long seed pods which are said to look like quivers for arrows (JT, CJ). The Hesquiat Nootka name (see discussion under Scotch broom—*Cytisus scoparius*) is unrelated to this term, and so, apparently, are the Makah names given by Densmore (1939) ("**chicha, patsaklibûp**"—all one name), and by Gunther (1973) ("**tcatcapatsaklɬ'bupt**"). The first is said to mean "plant-bearing moss" (Densmore, 1939), and the second, "canoe plant" (Gunther, 1973). However, the two names appear to be different renditions of the same term and, likely, Gunther's is the more accurate, both in transcription and translation.

Fig. 72 Giant vetch *(Vicia gigantea).* (Nancy J. Turner)

GROSSULARIACEAE (GOOSEBERRY FAMILY)

Ribes bracteosum Dougl. ex Hook. (Stink Currant) (Figure 73)

berries: **ʔɬʔi·ẇ** (IJ, JT)

bush: **ʔɬʔi·ẇapt** (IJ, JT)

MT gave the name **x̌abxʷtqapt** to a specimen of *R. bracteosum*, but JT said that she probably confused the plant with wild gooseberry (see *R. divaricatum*). When IJ was a girl, she recalls, the Nitinaht used to eat stink currants. They boiled them into a jam-like consistency and mixed in molasses, then ate them as a dessert. Before IJ's time, they used to eat them with seal oil. The berries had a laxative effect and were eaten in quantity by those suffering from constipation (IJ). IJ remarked that she never liked the berries very much.

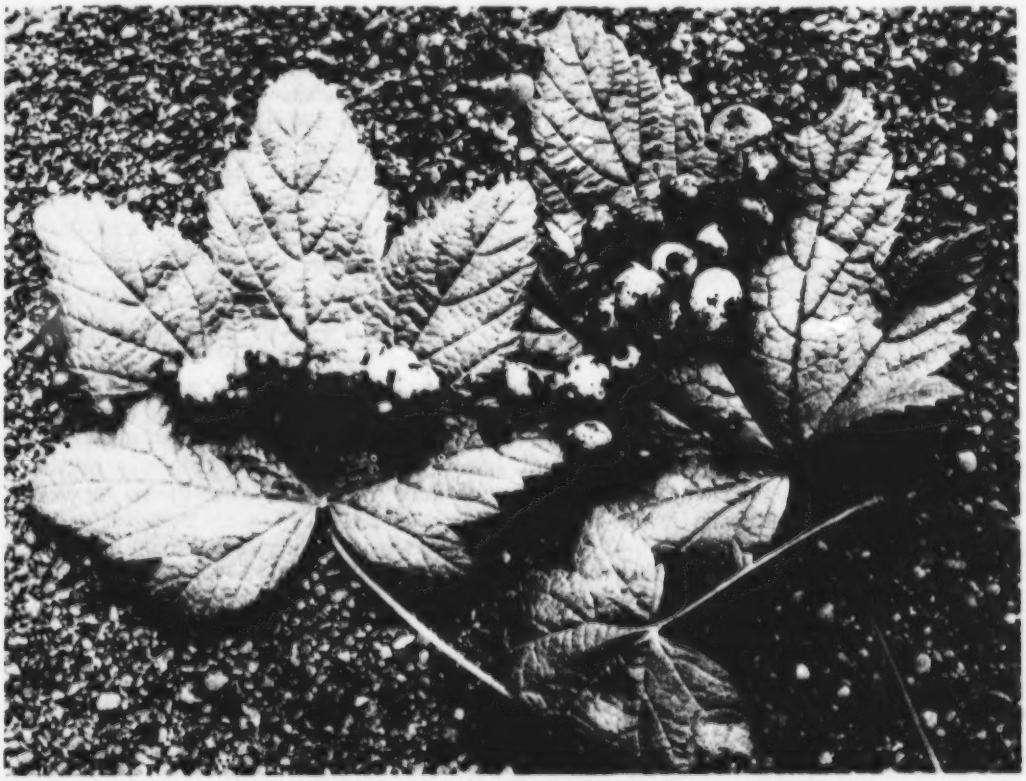

Fig. 73 Stink currants *(Ribes bracteosum)*. (Nancy J. Turner)

JT was told that he should not touch strong-smelling plants like this bush and cow-parsnip (*Heracleum lanatum*) when he went out fishing or he would not catch any fish.

The Hesquiat Nootka names for the berries and bush [**huɬʔi·wa** and **huɬʔiqmapt** respectively (Turner and Efrat, 1982)] appear to be related to the Nitinaht names, whereas the Makah name, "**k!ōlō'o**", given by Gunther (1973) for both *R. bracteosum* and *R. laxiflorum* Pursh, the trailing black currant, does not seem to be related. The Hesquiat names for the latter species [berries—**hašp̓u·na** (lit. 'smells [like excrement/?urine]'), and bush—**hašp̓uqmapt** (Turner and Efrat, 1982)] were not recognized by our Nitinaht consultants and, although they were shown a specimen of the bush, they knew of no Nitinaht name for it (JT, IJ, CJ, MT). The Manhousat name for the berries of *R. bracteosum* is apparently the same as the Hesquiat for *R. laxiflorum*, "**hashp'uuna**" (Ellis and Turner, 1976).

Ribes divaricatum Dougl. (Coastal Black Gooseberry)

berries: **ƛabu·xʷay** (JT, IJ)

plant: **ƛabu·xʷayapt** (JT, IJ)

JT said that wild gooseberries were formerly eaten. They were usually not cooked but picked and eaten straight from the bushes. There are several large bushes growing near the inside cove at Whyac. JT recalled that there was another type of gooseberry, called by the same name, that also grew in the Nitinat area. The leaves of this type were much the same but the berries, instead of being purple when ripe, remained green and were larger than those of *R. divaricatum*, with a smaller "wick" on the fruit. Like *R. divaricatum* berries, they were smooth and somewhat transparent. Possibly he was thinking of a garden variety of gooseberry.

The Hesquiat Nootka names for gooseberry [berries—**miɬk̓iẇa**, and bush—**miɬk̓iqmapt** (Turner and Efrat, 1982)] are not linguistically related to the Nitinaht names; nor, apparently, is the Makah name, "**catctka′bupt**", given by Gunther (1973). However, interestingly, the Comox Salish name for gooseberry, "**t!a′′abuxwăi**" (cf. Turner and Bell, 1971), is obviously related, and probably the source of the Nitinaht name. In fact, at one point, JT gave the spelling, **tabu·xʷay**, for the Nitinaht name; then later corrected it to **ƛabu·xʷay**. Other Coast Salish names for gooseberry [cf. Cowichan Halkomelem and Squamish—**ɬ̓émxʷ**, Saanich Straits—**qémk̓ʷ**, and Sechelt—**sɬemxʷ** (Turner and Bell, 1971; Bouchard and Turner, 1976; Turner, 1972)] may be cognate with the Comox name. If so, the Nitinaht terms must have been derived from Comox rather than the other way around. The Southern Kwakiutl names for gooseberry are in the same etymon with the various Coast Salish forms: [**ɬémxʷmes**, for the bush, and **ɬémxʷeli** for the berries (Turner and Bell, 1973)].*

LAMIACEAE, OR LABIATAE (MINT FAMILY)

Stachys cooleyae Heller** (Hedge-nettle)

k̓ʷitu·kʷapt (lit. 'tendency-to-stick plant'—cf. *Arctium minus*, burdock) (MT only)

MT applied the above name apparently because of the rough-textured stems of the hedge-nettle. She said she remembered it well from the Whyac area, where the specimen we showed her was collected. She knew of no use for it, however. IJ, when she heard the name given to this plant by MT, laughed, and said it must have been a "made-up" name and that the real 'sticky plant' was burdock (*Arctium minus*). IJ recognized the plant but knew of no name or use for it. When shown a specimen of the similar looking California figwort [*Scrophularia californica* Cham. & Schlecht. var. *oregana* (Pennell) Boivin], IJ remarked, "We call that man' and 'woman', the tree and plant like that. It looks like, but the male is different than the female. The male is just a little bit tougher than this one [referring to *Scrophularia* as the male and *Stachys* as the female]." (See also discussion of male and female under *Carex* spp. and *Typha latifolia*.)

The Hesquiat Nootka name for *Stachys*, also applied on one occasion to *Scrophularia*, is **tušksmapt** (lit. 'codfish plant'—apparently on account of its strong smell) (Turner and Efrat, 1982), and the Makah name is "**ada′′babupt**" (lit. "milk plant"), according to Gunther (1973).

NYMPHAEACEAE (WATER-LILY FAMILY)

Nuphar polysepalum Engelm. (Yellow Pond-lily)

pi·pi·la·qak̓ʷ (lit. 'resembles liver') (IJ, JT, LJ)

JT referred to this plant as "those wide ones on the lakes." He recalled that the large, thick rhizomes were used by the Nitinaht for some kind of medicine but did not remember any details. LJ elaborated: the rhizomes were scraped off into water that was very hot, but not boiling, and a spoonful of the liquid was given to each person in a household to keep them from getting sick when there was an epidemic of any kind, or, even just as a general precaution at any time. Her father used to administer this medicine to members of her family. He kept some of the liquid around the house so that people could take a spoonful of it "whenever they felt like it" (LJ). The Makah prepared a steam-bath for a sick person from the rhizomes (Gunther, 1973).

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* These names apparently apply both to *R. divaricatum* and to *R. lobbii* A. Gray, the sticky gooseberry.

** This information probably also applies to *S. mexicana* Benth.

No Makah name was given for this plant (Gunther, 1973; Densmore, 1939). The Nootka name [cf. Hesquiat—**haƛ̓ɬsmapt** or **haƛ̓ɬmapt**, and Manhousat—"**hachshitlhmapt**", (both lit. 'west wind plant') (Turner and Efrat, 1982; Ellis and Turner, 1976)], was not recognized by JT, IJ, or LJ, nor is the use of the plant by the Hesquiat as a charm to call the west wind, known to them.

ONAGRACEAE (EVENING-PRIMROSE FAMILY)

Epilobium angustifolium L. (Fireweed)

ʔaʔadakqi· (lit. 'fire on top'—a translation borrowing from English) (CJ, IJ)

The above name was "made up" by CJ and is based on the English common name. No traditional name for fireweed was remembered by our Nitinaht consultants; it was simply called **lu·lučχq** (lit. 'shiny tops'), the general name for any kind of "flower" (IJ—see Appendix 3).

The Coast Salish of Vancouver Island and the Puget Sound area used the cottony seed fluff, or pappus, in spinning to fill out the supply of mountain goat wool or dog wool (Turner and Bell, 1971; Gunther, 1973), but the Nitinaht apparently did not, although they did use thistle down for this purpose (see *Cirsium* spp.) (CJ). The Makah name for fireweed, "**popoxsa'dix**", said to mean "feather plant" (also applied to *Eriophorum* spp., cotton-grass) (Gunther, 1973), was not known to the Nitinaht, but a term of similar meaning was known to some Nootka people (Fenn *et al.*, 1979). The Hesquiat Nootka, however, knew of no name or use for fireweed (Turner and Efrat, 1982). Although it is now extremely common along the west coast of Vancouver Island, it was apparently less frequent before logging (CJ).

PLANTAGINACEAE (PLANTAIN FAMILY)

Plantago major L. (Broad-leaved Plantain, or Greater Plantain)

titibtaƛ̓kʷ [lit. 'resembles skunk-cabbage (*Lysichiton americanum*)'] (IJ, MT)

The leaves of this plant are widely known among Native peoples of western North America as a poultice medicine for boils, cuts, infections, and open sores. The Nitinaht used them for this purpose. They rubbed the leaves a little bit to get them moist, then placed them over sores and infections and tied them into place. They were renewed every few hours. IJ noted that this medicine effectively sucks the pus out of boils or sores. MT also knew of this use and used a Nitinaht word translating as 'rotten skin' when describing the condition that the leaves were used to treat. She also said that the leaves were a good medicine for stomach ulcers; they were apparently chewed up and swallowed for this treatment. The Makah and Nootka also used the leaves as a skin poultice (Densmore, 1939; Turner and Efrat, 1982; Fenn *et al.*, 1979). The Makah and Hesquiat names are not known but one Nootka man noted the resemblance of the plant to skunk-cabbage (Fenn *et al.*, 1979). Interestingly, the Haida name for *P. major* translates as 'village skunk-cabbage' (Turner, 1974).

RHAMNACEAE (BUCKTHORN FAMILY)

Rhamnus purshiana A. P. de Candolle (Cascara)

plant: **ƛ̓aχeƛ̓ksaƛ̓ubapt** (lit. 'D-adze handle tree') (JT, IJ, CJ)

laxative medicine made from the bark: **šabasiʔ** (lit. 'medicine for defecating') (JT)

Although Gunther (1973) recorded that the Makah eat the berries fresh, in July and August, JT had never heard of them being eaten by the Nitinaht.

JT remembered that his grandfather used cascara for D-adze handles, as the Nitinaht name implies, but knew of no other use for the wood. The Manhousat and Hesquiat Nootka also used the wood for D-adze handles and named the tree accordingly [**ƛ̓aƛ̓a·xʷasmapt** (lit. 'D-adze plant') (Turner and Efrat, 1982; Ellis and Turner, 1979)]. No such use was noted for the Makah (Gunther, 1973; Densmore, 1939), but the Makah name (cf. Gunther, 1973—"**k!abuq!wacbupt**"; and Densmore, 1939—"**Kla'bokusibup**"), may have a similar meaning. Densmore (1939) stated that the meaning of the name was unknown.

By far the best-known use of cascara, both among the Nitinaht, Nootka, and Makah, and among other Native peoples of western North America, was as a mild but effective laxative (cf. Edwards, 1980; Turner and Efrat, 1982; Fenn *et al.*, 1979; Gunther, 1973; Densmore, 1939). The plant was adopted into the medical pharmacopeias and for many years, was considered a valuable

drug species of commercial importance (cf. Davidson, 1923). Some Native people used to gather cascara bark, which is the medicinal part of the tree, and sell it to drug companies; during the 1930s and 1940s, it was said to sell for about 20 cents per pound (Ellis and Turner, 1976).

JT described the preparation and use of the medicine amongst the Nitinaht. The bark was peeled off in spring and early summer, while the sap was running. As JT noted, it is important that the inner sap sticks to the bark when it is removed because that is where the medicinal properties are—right next to the bark. The bark was steeped in boiling water, as one would make tea, and the infusion allowed to cool. It was then drunk like tea. About a cupful of the freshly brewed medicine would be the recommended dose for one who had constipation. However, it gets stronger as it stands, so that after a day, one would take about one tablespoonful (15 ml). JT recalled that it tastes bitter but leaves a pleasant aftertaste.

The same medicine can also be used as a tonic, to keep one's bowels regular (JT). For this purpose, a small dose, about one teaspoon (5 ml) would be taken daily. This liquid was also used to wash cuts, wounds, and sores, as a kind of disinfectant. It is known for its healing properties (JT).

The relationship of the Nootka and Makah names to the Nitinaht name has already been discussed. However, in Hesquiat and Manhousat Nootka, another term is used for the plant, relating to its use as a laxative [cf. Hesquiat—**šuc?iqumapt**, or Hesquiat and Manhousat—**šumapt** (lit. 'defecate plant')] (Turner and Efrat, 1982; Ellis and Turner, 1976), and these are linguistically related to the Nitinaht term for the laxative medicine, **šabasi?**, all three being derived from the root for 'defecate'.

ROSACEAE (ROSE FAMILY)

Aruncus sylvester Kostel. (Goat's-beard) (Figure 74)

sisiχbuχʷaχs (lit. 'herring eggs on the bushes') (IJ, JT)

IJ recognized this plant immediately and said that the root was used as a medicine, but warned that it was very strong and that one had to be careful in using it. The roots were pounded and boiling water poured over them. They were then soaked overnight. IJ noted that an enamel pot, not an aluminum or tin pot, should be used in making the medicine, because metal would spoil it. In the

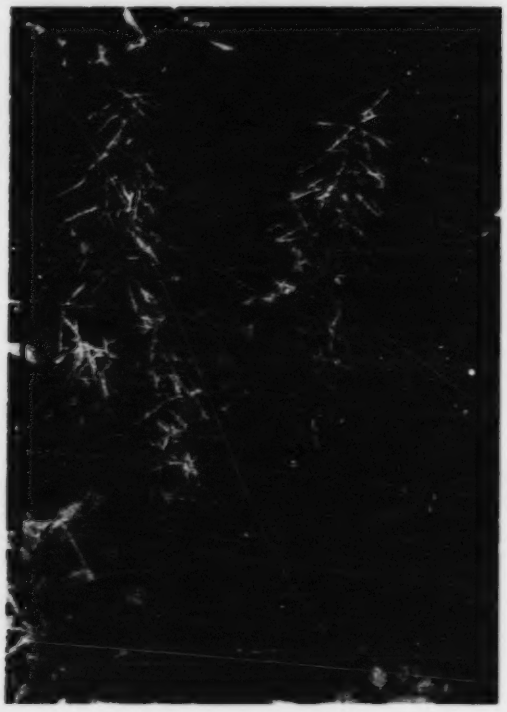

Fig. 74 Goat's-beard (*Aruncus sylvester*). (Nancy J. Turner)

morning the infusion was strained and then administered for a bad fever, or for an illness called **ɮa·ɬu·čχ**, which is something like measles, or possibly a form of measles. If the rash does not "come out" in this sickness, about a tablespoonful (15 ml) was given to the patient at bedtime and, by morning, the rash would appear. IJ said that some people are "allergic" to this medicine and it can make them very sick.

The Makah also used this plant medicinally. A mixture of the pounded root in water was drunk as a remedy for pain in the region of the kidneys. The leaves were also chewed by persons spitting blood and showing a tendency toward tuberculosis (Densmore, 1939). The Makah name, "**xa'xa'tsbūkkūk**" (Gunther, 1973), or "**hihi'iboklosis**" (Densmore, 1939), is translated in both cases as "(plant with) flowers that look like herring eggs", and hence seems linguistically related to the Nitinaht name, with the same meaning. The Hesquiat and some other Nootka peoples knew of no name or use for the plant (Turner and Efrat, 1982; Ellis and Turner, 1976; Fenn *et al.*, 1979).

Fragaria chiloensis (L.) Duchesne, *F. vesca* L., and *F. virginiana* Duchesne (Wild Strawberries)

berries: **ɬuʔulq** (JT)

plant: **ɬuʔulqapt** (JT)

The berries, especially those of *F. chiloensis*, which are common along the coast, were eaten fresh by the Nitinaht, "just like any other berries" (JT). However, they were apparently not dried because, as noted by Gunther (1973) for Makah, they were too small and soft to transport.

The Nitinaht name for the berries appears to be Salishan in origin [cf. Saanich Straits—**ɬe·'ləyʷ**; Cowichan Halkomelem—**ɬiʔləqʷ**; Squaxin—**ɬe'lakʷ**; Clallam—**ɬe'yuqʷ**; Puyallup-Nisqually—**ɬe'lɑqʷ** (Turner and Bell, 1971; Gunther, 1973; L. Thompson, pers. comm.)]. The Hesquiat and Manhousat Nootka name, on the other hand [**kaɬkintapi·ḥ**) (Turner and Efrat, 1982; Ellis and Turner, 1976)], and the Makah name ("**xadi'tap**"—Gunther, 1973), are not linguistically related to the Nitinaht.

Holodiscus discolor (Pursh) Max. ssp. *discolor* (Oceanspray, or "Ironwood") (Figure 75)

siwi·pt (JT, CJ, IJ)

At first, CJ and IJ applied the above name to a flowering specimen of *Physocarpus capitatus* (Pursh) Kuntze (ninebark) but, from CJ's description of the use of the plant, they were obviously mistaken in their initial identification.

Fig. 75 Oceanspray (*Holodiscus discolor*). (Robert D. Turner)

The wood of *Holodiscus* is extremely hard. It was used for a number of purposes by the Nitinaht, as it was by other Native groups in western North America (Turner, 1979). It does not occur in the coastal area of Nitinaht territory; the Nitinaht used to travel inland to the vicinity of Cowichan Lake to obtain it. CJ noted that a pole of "ironwood", with a yew-wood barb tied on the end, was used as an octopus spear and called **si·yu·pa̓ck**. [This term is possibly related to the name **siwi·pt**, for the plant itself, although sometimes the entire implement was made of yew-wood (JT).] IJ said that the wood was also used to make long needles, used in mat making (see *Scirpus lacustris*). The wood was also used for barbecue sticks because it is tasteless and does not impart an unpleasant flavour to the food being cooked (CJ). JT said that it was used to make practice bows for children because it is straight and requires little carving or whittling down. He and IJ also recalled that it was used, recently, to make knitting needles and that the Cowichan Salish people used it for knitting needles and for skewers on which to roast and dry clams. The skewers were stuck through the "belly" part of the clams, and many clams would be threaded on, then the whole thing was placed over a fire to roast and dry. He added that the Nitinaht people, at least those of the Clo-oose area, did not usually have access to clams and so did not use them.

The Nitinaht name for "ironwood", **siwi·pt**, is related to Nootka [cf. Hesquiat—**siwipt** (Turner and Efrat, 1982)], as well as to Makah [**"tsik'wip"** (Gunther, 1973)].

Osmaronia cerasiformis (T. & G.) Greene [syn. *Oemleria cerasiformis* (H. & A.) Landon] (Indian-plum, or Bird-cherry)

lilidiqx (lit. 'stone centres') (IJ)

IJ seemed to confuse this shrub with *Amelanchier alnifolia* Nutt. (saskatoon berry), calling a specimen of the latter by the above name. Later however, she remarked that the fruit of the plant called by this name had a large stone inside, like a cherry. She said the Nitinaht used to eat the fruits and that they were very sweet when cooked. The berries were also eaten by the Vancouver Island Salish and by many Native groups in western Washington (Turner and Bell, 1971; Gunther, 1973). No information on the names or uses of *Osmaronia* could be obtained for Makah or Nootka, and the various Salish names, given by Turner and Bell (1971), show no linguistic relationship with the Nitinaht term.

There is some possibility that IJ may have been referring to high-bush cranberry (*Viburnum edule*) rather than Indian-plum. No specimen of this shrub was available as a sample to show IJ, but neither she nor JT seemed to recognize a photograph of the fruiting shrub from Turner (1975). The fruits of *Viburnum* are not particularly sweet but the Hesquiat Nootka name, like the Nitinaht name applied to Indian-plum, means 'stone inside' (Turner and Efrat, 1982; see also Appendix 2).

Potentilla pacifica Howell (Pacific Cinquefoil, or Silverweed) (Figures 76 and 77)

edible roots: **ƛicsap** (JT, IJ, CJ)

plant: **ƛicspapt** (JT)

CJ and IJ called this plant "buttercup", and Gunther (1973) mistakenly identified it as "*Ranunculus reptans* L." The long, fleshy roots were cooked and eaten by the Nitinaht, as they were by the Makah, Nootka, and virtually every other Northwest Coast group (Gunther, 1973; Turner and Efrat, 1982; Ellis and Turner, 1976; Fenn *et al.*, 1979; Turner, 1975). The plants grow, often together with wild clover (*Trifolium wormskioldii*), in salt marshes, estuarine flats, and along shorelines, in sandy, gravelly, or peaty soils. Along with wild clover rhizomes, bracken fern rhizomes (*Pteridium aquilinum*), and camas bulbs (*Camassia* spp.), the last of which were imported, cinquefoil roots constituted the most important and substantive carbohydrate source in the traditional Nitinaht diet. Within the present century, however, they have been almost totally replaced by potatoes and other imported carbohydrates, and few Nitinaht people today know what the plants look like.

The roots were dug in the fall, after the leaves had started to turn orange and the plants had died down but were still quite visible. A straight, pointed digging stick of yew (*Taxus brevifolia*) was used to pry the roots up. The stick was inserted into the ground at several successive points around a clump of *Potentilla* to loosen the roots, and then the entire clump was pried out and shaken to remove the adhering sand and dirt. The leaves were removed, and the roots tied in fist-sized bundles, using one of the longer roots as a tie. Each woman used her own special knot in tying the roots so that she would be able to recognize them in the steaming pit. The roots were placed into the pack-basket and taken home. A woman might dig for many days to get enough roots to last her family over the winter.

Fig. 76 Pacific cinquefoil *(Potentilla pacifica)*. (Nancy J. Turner)

Fig. 77 Pacific cinquefoil roots, ready for cleaning, bundling, and cooking. (Nancy J. Turner)

The root bundles were steam-cooked, traditionally in large, communal steaming pits, or, more recently, if only a few were to be cooked, on top of the stove in a large cast iron kettle. The methods used for pit-cooking are described in detail in the introductory section on Plant Foods. Additionally, JT thought that, long ago, the roots may have been steamed in cedar cooking boxes. The cooked roots were eaten fresh, after being cooled, or were dried for winter storage. Roots to be stored were placed, interspersed with layers of dried grass, in large cedar-bark storage baskets, which were stowed on scaffolding near the ceiling of the house (IJ, CJ). Before being eaten, the dried roots were reconstituted by being soaked overnight and were then briefly steamed (IJ). Traditionally, the roots were dipped in seal or whale oil as a condiment, or, more recently, in Mazola or some other vegetable oil, and were eaten with the fingers. IJ remarked that they are sweet, like sweet potatoes, and were eaten just like a dessert. They were also eaten with duck [see (*Urtica dioica*—stinging nettle)] and fish or meat (JT).

We had an opportunity to try digging and steam-cooking some of these roots, by both the pit and kettle methods, as part of a separate project on analysis of some traditional Indian root foods, undertaken in collaboration with nutritionist Dr. Harriet Kuhnlien. The cooked roots were tasted by several people, including JT, IJ, and CJ, and were considered very good, although some were noted to be quite bitter. Generally, however, they were very palatable and were much enjoyed by IJ and CJ, who had not tasted them for many years. IJ used to go digging these roots with the "old people" when she was a girl.

Within its habitat type, Pacific cinquefoil is quite common. A very extensive patch of it can be found on the tidal flats along the Cheewhat River, east of Clo-oose.* The plants here are extremely dense and prolific (see Fig. 33b). However, the soil on these flats was peaty, and it was difficult to separate the cinquefoil roots from the soil without breaking them.

IJ pointed out that the best type of soil for digging the roots was fine sand and, in fact, did not recall that the Nitinaht people ever did harvest roots on the Cheewhat River flats. She recalled that the Whyac people used to dig roots from the upper beach at the small cove just east of the village. In the Port Renfrew area, along the two arms of the San Juan River, there were, and still are, many locations where cinquefoil grows in abundance. One good place, noted by IJ, was at the east end of Deering's Bridge, over the north arm of the San Juan estuary. However, for many years, horses and cattle have been allowed to range over these and other cinquefoil grounds and their trampling and grazing have reduced the quality and quantity of the plants. Another good location, used traditionally by the Pacheenaht people, is on an island across from the sawmill, near the railroad right-of-way, on the south arm of the river. "That's just loaded too, all over!" (IJ). This site was considered so valuable in former days that the Pacheenaht Chief who "owned" these digging grounds used to have a number of slaves (between six and ten) watching and guarding the patch to insure that no unauthorized person would dig there. Then, at the end of October, the Chief would have his slaves dig the roots for him (IJ, CJ).

The Nitinaht name for Pacific cinquefoil roots is related to both the Nootka [cf. Hesquiat and Manhousat **ƛic̓up** (Turner and Efrat, 1982; Ellis and Turner, 1976)] and Makah [**"kɬitc'sap"** (Gunther, 1973, where it is mistakenly identified as *Ranunculus reptans* leaves), and **"ki'chapi"** (Densmore, 1939)].

The general use of Pacific cinquefoil and its nutritional characteristics are described by T and Kuhnlein (1982) and Kuhnlein *et al.* (1982).

Prunus emarginata (Dougl. ex Hook.) Walpers (Bitter Cherry, or Wild Cherry) (Figure 78)

bark: **di·ʔdikʷa·ʔdib** (lit. 'gripping long object', apparently pertaining to its use for binding) (JT, CJ)

plant: **di·ʔdikʷa·ʔdibapt** (JT, CJ)

The small, bitter fruits were not eaten (JT).

The smooth, tough bark of this wild cherry is widely used by Indian peoples of wester orth America as a wrapping for implements and for other purposes (Turner, 1979). The Nitinaht used it for binding and wrapping joints of a number of different types of implements, including the large

* It was noted that the plants in this locality were of two forms: those with a silky pubescent upper leaf surface, and those with a green, glabrous upper leaf surface. These two forms were growing intermingled, although, probably because of vegetative reproduction by stolons, they tended to form patches of one or the other. The roots of these forms were not observably different.

Fig. 78 Bitter cherry *(Prunus emarginata)*, showing bark, used for wrapping implements. (Robert D. Turner)

yew-wood whaling harpoon shaft which was joined at the middle and wrapped at the joint with cherry bark and salmon and seal spears, adze handles, bow hafts, and harpoon heads (Figure 24, p. 31) (see general discussion on Artifacts). The bark was harvested by cutting around the trunk of the tree in spiral fashion, at a width of about 2.5 cm (1 in). A knife was used for this purpose, and one would cut as far down the trunk as one could. The resulting spiral strip was peeled off the tree and, if desired, could be further cut into thinner strips for binding (JT). After an implement was tightly bound with cherry bark, the entire joint or area covered by the bark was thickly smeared with pitch (see *Picea sitchensis*—Sitka spruce, and *Pinus* spp.—pines). The pitch was first chewed to make it soft. After the pitch had been applied, the implement was held over a flame and the surplus pitch was burned and melted away. The coating then became hard and shiny, like shellac, and made the joint or surface waterproof (JT).

In addition to its use as a wrapping material, cherry bark was also used to make the reed for a Nitinaht wolf-whistle. The main part of this special ceremonial instrument was often of elderberry wood (see *Sambucus racemosa*). The bark for the reed was scraped with a knife until it was very thin. JT remarked that the thinner the bark was scraped, the higher would be the pitch of the whistle.

Cherry bark was also used medicinally. A "tea" made by steeping the bark in boiling water was taken as a general tonic, for healing any kind of sickness (JT).

No name or use for this species was given for the Makah by Gunther (1973) or Densmore (1939), and the Nootka term for the bark [cf. Hesquiat **ɬitẇapt** and Manhousat "**lhitx-ẇapt**" (Turner and Efrat, 1982; Ellis and Turner, 1976)] is not related to the Nitinaht.

Pyrus fusca Raf. [syn. *Malus fusca* (Raf.) Schneider] (Pacific Crabapple) (Figure 79)

fruit: **cɨχapχ** (lit. 'sour spherical object') (IJ, JT)

plant: **cɨχapχapt** (JT)

The fruit, although somewhat sour, was eaten by the Nitinaht, as it was by the Nootka, Makah, and virtually every other Northwest Coast group (IJ; Turner and Efrat, 1982; Fenn *et al.*, 1979; Ellis and Turner, 1976; Gunther, 1973; Turner, 1975). IJ gave no details of its use but, undoubtedly, the

Fig. 79 Pacific crabapple *(Pyrus fusca).* (Nancy J. Turner)

Nitinaht, like the Makah and Nootka, picked the fruits while still hard, in late summer and fall, and stored them in baskets until they had become sweeter and softer before eating them (cf. Fenn *et al.*, 1979; Gunther, 1973). JT noted that there are many crabapple trees along the Nitinat River and that the grouse there like to feed on the fruits.

The wood, which is almost as hard and resilient as yew (*Taxus brevifolia*), was sometimes used by the Nitinaht for digging sticks, such as those used for *Potentilla* roots. Additionally, if a tree could be found with a branch growing naturally at a "V" angle, it might be cut down for use as a gaff for salmon; the lower part of branch would be left intact to form the hook, and a section of trunk would form the handle. Gaffs were also made of red cedar, with a separately attached piece of yew or bone lashed on to form the hook (JT).

JT stated that the Makah of Neah Bay use a "tea" made from crabapple bark as a tonic; this use was confirmed for the Makah by Densmore (1939). IJ described its use by the Nitinaht as a medicine for general sickness. The bark was taken off, washed, and soaked, in the same manner as the roots of *Aruncus sylvester* (goat's-beard). Boiling water was poured over it and the infusion was allowed to stand for some time. Then the "tea" was drunk: "That's good for medicine, any kind of sickness . . . When a person is losing weight, and coughing . . . it tastes good, too." (IJ).

The Makah chewed crabapple leaves for lung trouble; they tasted bitter and caused one to "feel drunk" (Gunther, 1973). They also used a decoction of the bark as a healing wash for sores, boils, and bleeding piles (Densmore, 1939). The Nootka, at least those of Ahousat, formerly used a decoction of the bark as a cough medicine (Fenn *et al.*, 1979).

The Nitinaht name is related to the Makah [cf. crabapple fruit—**"tsɬxa'pix"** (Gunther, 1973)], and possibly to the Nootka name [cf. Hesquiat and Manhousat for the fruit—**ciciɬʔaqχ** (lit. 'sour inside'; **ciɬak** 'sour') (Turner and Efrat, 1982; Ellis and Turner, 1976)].

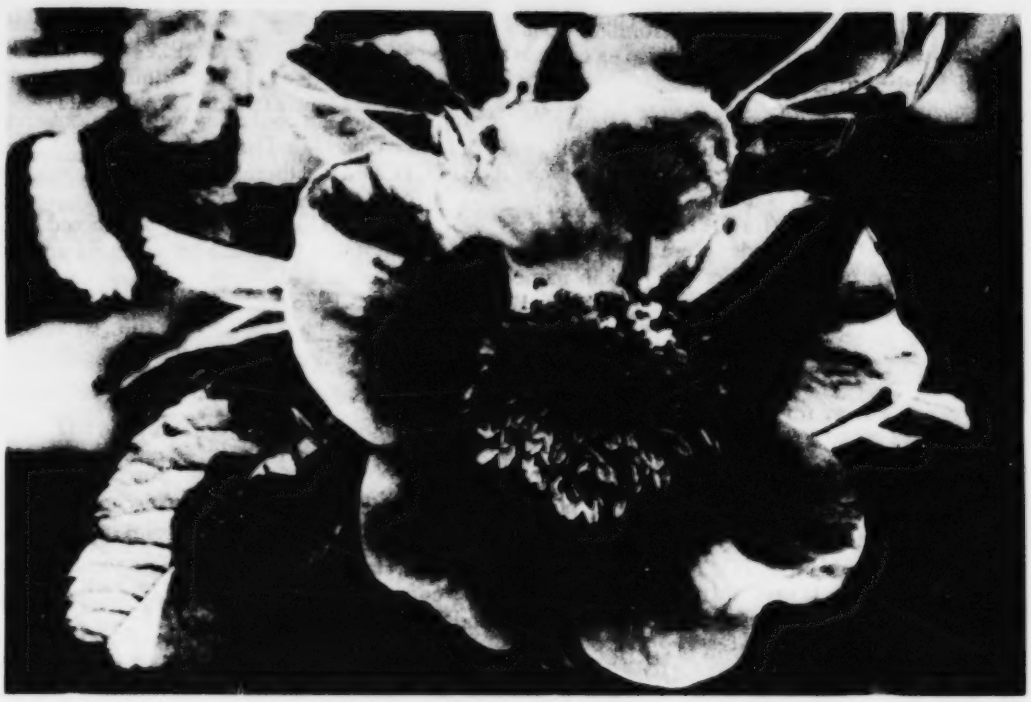

Fig. 80 Common wild rose *(Rosa nutkana).* (Robert D. Turner)

Rosa nutkana Presl (Common Wild Rose, or Nootka Rose) (Figure 80)

fruit: **patʕay** (IJ, JT)

plant: **patʕayapt**)IJ, JT)

IJ said that the hips were eaten raw in the fall, right from the bushes: "It's real nice." The leaves were used at any time of the year when they were available, for tea. This was also considered to be a good medicine (IJ). The Makah and Central Nootka also ate the hips (Gunther, 1973; Turner and Efrat, 1982; Fenn *et al.*, 1979; Ellis and Turner, 1976). (Only the outer rind should be eaten, however, because the seeds inside have sliver-like hairs that can irritate the skin and digestive tract.) The Makah used the mashed leaves as a poultice for sore eyes, and for severe pain and any form of abscess (Densmore, 1939).

The Nitinaht name is related to that of Nootka [cf. Hesquiat for the fruit, **patʕiwa** (Turner and Efrat, 1982), and Manhousat, "**patʔliwa**" (Ellis and Turner, 1976)], but apparently not with the Makah, where the fruit is called "**ƛlikwat**" (Densmore, 1939), and the bush is "**kliiwa'tibat**" (Densmore, 1939), or "**k!liqwai''abupt**" (Gunther, 1973). These terms seem to have been borrowed from the Quileute, whose name for this plant is "**tɬ'iqʷay**" (Gunther, 1973, Appendix 1).

Rubus leucodermis Dougl. ex T. & G. (Blackcap, or Black Raspberry)

fruit: **ciciypaƙkʷ** (lit. 'looks like a hat'; cf. **ciyaʷpxʷs** 'hat') (JT)

plant: **ciciypaƙkʷapt**

The raspberry-like fruits were eaten whenever they could be obtained, probably raw and fresh, like thimbleberries (*Rubus parviflorus*) (JT). No Makah name for these berries was given by Gunther (1973) or Densmore (1939), and the Nootka name [cf. Hesquiat and Manhousat, for the berries—**ɬisšiƛ** (**ɬismis** 'blood') (Turner and Efrat, 1982; Ellis and Turner, 1976)] is not related to the Nitinaht.

Rubus parviflorus Nutt. (Western Thimbleberry)

fruit: **ƛ̓ɛsi̓c** (JT)

plant: **ƛ̓ɛsi̓capt** (JT)

The young, tender sprouts were eaten in the spring, but were not cooked as were salmonberry sprouts (*Rubus spectabilis*). They were simply peeled and eaten raw (JT). The berries were eaten raw, from the bushes. They were seldom dried for later use (JT). JT said that there was a specific name for the edible shoots, but could not remember it.

The Makah name (for the berries) is given as "**lūlūwa'ts**" by Gunther (1973), who noted that the sprouts and fresh berries were eaten and the leaves made into a tea taken for anaemia and to strengthen the blood. Neither the Makah name nor the Hesquiat and Manhousat Nootka name [berries—**ƛ̓a·č̓ʔa·ɬ** (Turner and Efrat, 1982; Ellis and Turner, 1976)] is related to the Nitinaht name.

Rubus spectabilis Pursh (Salmonberry)

fruit (gen.): **qaway** (cf. **qawaƛ̓k** 'red-hot') (IJ, JT)

fruit, golden form: **šaƛ̓abaƛ̓kʷapɨ** (lit. 'looks like yellow spherical objects') (JT)

fruit, ruby form: **ƛ̓iɨabɬ** (lit. 'red spherical object') (JT)

fruit, dark purple form: **bukʷaqabɬ** (lit. 'purple spherical object') (JT)

plant: **qawɬpt** (IJ, JT)

sprouts: **šišič̓qa·ʔdɬ** (IJ, JT); *or* **se·ski** [this is a colloquial name for the sprouts used by school children, and, IJ says, by non-Indians—probably a corruption of the Nootka name for thimbleberry sprouts (cf. Hesquiat—**č̓a·šiẘa**; Turner and Efrat, 1982)] (IJ, JT)

sprouts, when cooked: **tɬ·kʷid** (JT, IJ)

The sprouts were eaten by the Nitinaht, as by other Northwest Coast groups (Turner, 1975). They were suitable for eating only during an interval of a couple of weeks, just after flowering time, around April or May, depending on the weather conditions and the start of the growing season (IJ). The sprouts are ready to harvest when they are about 0.5 m (1 ft., 6 in.) high; if picked when they are too short they will be too soft and too sour. They could be eaten raw, after being peeled. They are sweet and juicy, especially those with reddish bark. Traditionally, however, they were usually steam-cooked in an underground pit, similar to that used for steaming root foods such as cinquefoil roots (*Potentilla pacifica*) (see general discussion on Plant Foods). The sprouts could be picked either from the base of the shrub or from the branches. If they were to be cooked, they were not peeled until after cooking. After they were picked, the leafy tops were pinched off and the sprouts bunched together in bundles about 8 cm (6 in.—fist-sized) across and about 0.3 to 0.6 m (1 to 2 ft.) long. The bundles were tied together at both ends and pit-cooked, or, more recently, steamed on top of the stove in a large kettle (IJ).

IJ said that these sprouts were well liked and were eaten as a kind of dessert. People used to gather them in large pack-baskets. She recalled that men going out to the halibut fishing grounds used to take large quantities of the sprouts along with them, so that they could exchange some with their friends, should they meet them out in the fishing grounds. They would then trade the sprouts for dried fish, or some other food product (IJ).

According to Arima (1975-76), the month of May is called "**qawashpɬ**" after salmonberry, presumably because the sprouts are ready at this time.

Salmonberries are among the first fruits to ripen, and are ready by early July (JT). They were eaten fresh, being considered too seedy and watery to be dried (IJ). Although the different colour forms of the fruit were recognized and given specific names, there was no preference given to one over the other in terms of edibility or palatability. Berries of all colour forms were picked and eaten together (JT). JT warned that if one ate the whitish receptacles within the fruit, it would cause constipation. A certain type of thrush (probably Swainson's Thrush), which is brown with a light-coloured breast spotted with dark spots, is called **qaqawaši·ɣ̓k** (lit. 'tendency to make salmonberry') (JT).

Salmonberry stems, when large and straight enough, could be used for children's practice bows (JT). Additionally, the Makah used the wood for pipestems (Gunther, 1973), and the Hesquiat Nootka used the roots for pipebowls, and the sticks for salmon spreaders and clam skewers (Turner and Efrat, 1982). Our Nitinaht consultants knew of no medicinal uses for the plant, but the Makah

chewed and swallowed the pounded bark to check haemorrhaging, following confinement (Densmore, 1939). They also placed the pounded bark on an aching tooth or festering wound to kill the pain (Gunther, 1973).

The general Nitinaht name for salmonberries is related to both the Nootka (cf. Hesquiat and Manhousat **qawi·**—Turner and Efrat, 1982; Ellis and Turner, 1976), and the Makah, "**ka'k'wē**" (Gunther, 1973), but the (first) name for the sprouts is not linguistically related, at least to the Hesquiat and Manhousat a term, **ṁa·yi** (Turner and Efrat, 1982; Ellis and Turner, 1976). (See, however, the earlier notation concerning the Nitinaht term **se·ski**.) The Makah name for the sprouts is not known.

A cove about 1.6 km east of Cullite Cove is called "**qawishad**", or "salmonberry cove" (Arima, 1975-76).

Rubus ursinus Cham. & Schlecht. ssp. *macropetalus* (Dougl. ex Hook.) Taylor & MacBryde (Trailing Wild Blackberry, or Pacific Trailing Blackberry)

χi·χi·ʔuk̓ʷs (lit. 'creeping along the ground ones') (JT)

The above name apparently applies both to the vines and the berries. These wild blackberries were eaten whenever they could be obtained (JT).

RUBIACEAE (MADDER FAMILY)

Galium aparine L. (Common Cleavers, or Common Bedstraw), and *G. triflorum* Michx. (Sweet-scented Bedstraw)

k̓ʷitipt (lit. 'sticks, grabs'); *or* **k̓ʷitik̓ʷtšapt** (lit. 'it grabs you plant') (both IJ, CJ)

These plants have minute hooked hairs on the stem and leaves and, as IJ noted when giving the Nitinaht name, "It grabs you, then sticks on." CJ jokingly called it "Indian scotch tape." Although both species were called by the same name the difference between them was recognized, as evidenced by the following quotation by IJ when she was shown a specimen of *G. aparine:*

> "Oh, my, that's my medicine . . . There's two different kinds: they're [the other species—*G. triflorum*] small, they smell nice, just like perfume . . . but it stays short, that smells real pretty, but this *[G. aparine]* hasn't got any smell. But it's long, about nine feet. I used to have long hair. My grandmother used that. She used to soak it in water, cold, clean water, and it gets brown. She strained [the leaves out] and she used to use it. Wet my hair and braid my hair. My hair was right down to my ankles . . . It took lots of work. That's the one *[Galium]*. Everybody was trying to find out . . . what I was using, but it was really secret, belongs to [my] family, not all everybody's."

IJ had long, braided hair until just a few years ago, when she had it cut. She stressed that this hair wash was a family secret and that none of the other Nitinaht people knew of it. She implied that *G. triflorum* was preferred, if not used exclusively, over *G. aparine*, because of the former's sweet scent.

Interestingly, the value of *G. triflorum* as a hair wash was also recognized by the Makah:

> "**apsi'i**, meaning 'for the hair,' was the name by which this plant *[G. triflorum]* was known among the [Makah] Indians. The leaves were mashed and rubbed on the hair . . . Another informant brought a duplicate of this plant and said its native name meant 'sticky [see Nitinaht names]. According to this informant, the leaves were pounded, mixed with cold water, and applied to the hair to stimulate its growth." (Densmore, 1939).

The Hesquiat Nootka name has a similar connotation to the Nitinaht: **k̓ʷi·timc** (cf. **k̓ʷitšiX** 'to stick on') (Turner and Efrat, 1982). One Ahousat man noted that bedstraw plants (undoubtedly of *G. triflorum*) were rubbed on the body during bathing for their nice scent (Fenn *et al.*, 1979).

SALICACEAE (WILLOW FAMILY)

Populus balsamifera L. ssp. *trichocarpa* (T. & G. ex Hook.) Brayshaw (Black Cottonwood)

k̓ʷa·ʔdqapt (JT, IJ, CJ, LJ)

The above name applies to the entire tree (JT). JT and CJ recalled that there was also a specific name for the inner bark, which was used by the Nitinaht to reinforce other types of plant fibres in spinning. However, this term could not be recalled by any of the Nitinaht elders. The use of the inner bark was described in detail by JT. It was gathered during May and June, when the sap is running, about the same time cedar bark is harvested. The bark was peeled off and the paper-thin layer of tissue between the outer bark and the "sap" (i.e., cambium) was peeled off. It was then "shredded", by a method called **l̓u·xʷil̓u·xʷ**. The fibrous tissue was pulled back and forth, downwards, first from one side, then from the other, over a sharp rock or an upright, wedge-shaped piece of hard wood. This had the effect of separating the fibres. (JT noted that this method was used only for cottonwood bark; cedar bark was pounded, not shredded in this way.) The shredded bark came out in thread-like strands, which were then spun together with inner bark of either red or yellow cedar (see *Thuja plicata* and *Chamaecyparis nootkatensis*). JT said that, by itself, the cedar bark would dry up and get brittle and break but, with the addition of cottonwood bark fibre, it never dries or cracks like that. The spinning was done by hand, on the bare thigh, and the size of twine one made was dependent on what it was going to be used for. For example, if one were making babies' clothing, one would choose yellow cedar bark because it is much softer, and one would make the strands of cedar bark and cottonwood fibre very fine, to obtain a fine, soft thread (JT).

Cottonwood fibre was also spun together with stinging nettle fibre (see *Urtica dioica*) to make twine for fishing lines and nets and for duck nets. It served to strengthen the nettle fibre (JT). JT pointed out that, in fishing lines, only the "leader" portions were of nettle and cottonwood fibre; the main portion of the line was invariably of bull kelp (see *Nereocystis luetkeana*). A more detailed description of the duck nets is given under stinging nettle (*Urtica dioica*).

As far as can be determined, this use of cottonwood bast fibre for reinforcing other plant fibres is not recorded for any other Northwest Coast group, although willow bark (*Salix* spp.) is used for twine by some groups in western Washington. For the Nitinaht, cottonwood fibre was a significant resource and its use should be further investigated. Incidentally, JT and CJ had never heard of cottonwood cambium being eaten, as it was by some Native groups (cf. Turner, 1973).

In addition to the use already described, cottonwood had other applications. The knots were sometimes used like those of hemlock (*Tsuga heterophylla*) and other coniferous trees (excluding Sitka spruce—*Picea sitchensis*) in the manufacture of molded halibut hooks (JT, CJ). The sweet-smelling, yellowish resin from the new buds was used as a base for paints. Various pigments could be mixed with it, and the resulting mixture was painted on wood and other materials to be coloured (JT). (The resin itself yields a yellow colour, which was probably used by itself on occasion.) Sometimes the bud resin was added as a scent to a skin cosmetic made from deer fat. The veil-like layer of fat over the stomach of a deer was used to make this ointment. It was melted down to lard and the cottonwood resin added as perfume, then, while still molten, the mixture was poured into dried and cured bull kept floats (see *Nereocystis luetkeana*), which were set into the ground. The fat was allowed to solidify; the kelp mold was then peeled away, leaving a bulb-shaped piece of scented tallow, called **hibkis**, that could be rubbed on the skin as a conditioner or it could be used to prevent chapping and drying of the skin (IJ, JT). IJ still makes this cosmetic, but instead of adding cottonwood buds, she mixes in talcum powder to give it a nice scent.

Cottonwood bud resin was also used as a medicinal salve for wounds and cuts (JT, IJ).

JT noted that the name for cottonwood could not be analyzed in Nitinaht, with the exception of the **-apt** "plant" suffix. He suggested, therefore, that the name was a very old one, or, alternately, that it was borrowed from another language. In fact, the name does seem to have been derived from Nootka [cf. Hesquiat, for the buds—**k̓ʷaȟuẇin**, and for the tree—**k̓ʷaȟuẇinqmapt** (Turner and Efrat, 1982)]. Notably, the Hesquiat also used the buds to make the fragrant salve of deer fat (Turner and Efrat, 1982), and hence, if the Nitinaht name was derived from Nootka, it is likely that this use of the tree was also. None of the Nitinaht elders consulted knew of a term that applied specifically to cottonwood buds. It should also be noted, however, that the Hesquiat consultants did not feel that cottonwood grew originally in their area but that it was imported from the Fraser Valley region (Turner and Efrat, 1982). There is, nevertheless, no evidence of borrowing the name from the

Halkomelem Salish, whose name for cottonwood (Cowichan dialect) is **čəwʔi·ɬp** (Turner and Bell, 1971), and no term for cottonwood is given for Makah by Gunther (1973) or Densmore (1939).

Salix hookeriana Barratt (Hooker's Willow), *S. lasiandra* Benth. (Pacific Willow), *S. scouleriana* Barratt (Scouler's Willow), and other *Salix* species (Willows, general)

ʕitipt (lit. 'lie plant') (JT, IJ, CJ); *or* **kaɬiy̓kapt** (lit. 'single-pronged barbecue stick plant') (JT)

JT explained the meaning of the first name in more detail. There is no word in English corresponding exactly to the meaning of the Nitinaht root-word for willow. It implies "lie, not telling the truth" but, at the same time, it indicates something that is "not quite the real thing, but is a portent of the real thing." For example, the month of April is called **ʕita·bɬ** (lit. 'the month of lies') because one cannot predict what the weather is going to be; often it is sunny and bright, just like summer, but it is not summer, because it can quickly revert back to pouring rain, clouds, and hail. The reason willow is given the name 'lie plant' is because the roots of one kind—a low, bushy type that grows right along the banks of rivers—were used by young Nitinaht boys and girls to rub themselves, at the commencement of their adulthood training. The willow roots, being soft and non-irritating to the skin, were used as a preliminary to other, tougher types of scrubbers, namely hemlock boughs (*Tsuga heterophylla*), yew branches (*Taxus brevifolia*), and red cedar boughs (*Thuja plicata*), each successively harder than the previous type. The willow roots were pre-scrubbers, applied gently to the tender skin of seven- and eight-year-old children in preparation for harder, "real", training and it is this use that is implied by the Nitinaht name **ʕitipt** (JT). The willow roots had no special name, they were simply called **ʕitipti·c ƛu·bač** (lit. 'willow roots') (JT). Although one particular kind of willow was used to make the pre-scrubbers, the Nitinaht names apparently apply to all willows. JT, IJ, and CJ were shown several species of willow, including those named, and although the differences in size and leaf-shape were noted, they gave no nomenclatural distinction in the Nitinaht names. At first, CJ gave the name **ƛapaʔbaɬapt** (lit. 'double-pronged barbecue stick plant'; cf. **ƛapaʔbaɬ** 'double-pronged barbecue stick') to a specimen of willow (*S. lasiandra*), but JT said that double-pronged barbecue sticks were made of split cedar (*Thuja plicata*) and that willow wood was used only for single-pronged barbecue sticks, called **kaɬeẏk**, and hence that willows were sometimes called **kaɬiy̓kapt**. He said that willow wood was preferred in making (single-pronged) barbecue sticks because ". . . when you cook it, it's tasteless, not like cedar. It's one of the best. They get straight ones in the woods, [they] pick out the best and straightest" (JT). The barbecue sticks were used mostly for roasting salmon (JT). The Makah used willow leaves as an antidote for shellfish poisoning and used an infusion of the roots as a hairwash (Gunther, 1973), but the Nitinaht did not know of these uses (JT).

The Makah name for Hooker's willow (*S. hookeriana*) is reported as "**kɬik'tci'bupt**" (lit. "dog plant") by Gunther (1973), and the Hesquiat Nootka name for this willow, and probably other *Salix* species, is **ʕiɬčsmapt**, a related form, also said to pertain to dogs (Turner and Efrat, 1982). Despite the similar sounds in the Nitinaht name, **ʕitipt**, it would appear that this form is not related to the Hesquiat name, nor to the Makah. It is apparently unique to the Nitinaht language.

SAXIFRAGACEAE (SAXIFRAGE FAMILY)

Tellima grandiflora (Pursh) D. Dougl. ex Lindl. (Tall Fringecup)

hahapcpa· (lit. 'hairy on one side') (MT; LJ)

IJ recognized this plant but knew of no Nitinaht name for it. MT said that it was her grandmother's special medicine, but gave no further details. LJ recalled that it is very common in the vicinity of Whyac and that it was used like the liverwort, *Conocephalum conicum*, as a medicine for a person who had recurring dreams of having sexual intercourse with a dead person. Chewing this plant would prevent him from having these dreams; if he continued to have them, it was believed, he (or she) would eventually join the dead person, and would himself die.

SCROPHULARIACEAE (FIGWORT FAMILY)

Castilleja hispida Benth. (Harsh Indian Paintbrush), and *C. miniata* Dougl. ex Hook (Common Red Indian Paintbrush)

ʔamaš [lit. '(woman's) breast'] (IJ)

The above name relates to the use of the plant by children, who liked to suck the sweet nectar from the corolla tubes (IJ, JT). JT said that the brightly-coloured flowers were formerly used to trap

hummingbirds, whose skins were used in the making of special ceremonial hats. The flowers were covered with snail slime in which, when the tiny birds attempted to suck the nectar from the flowers, they became entrapped. The Makah also used the flowers to ensnare hummingbirds, which were said to be used as a charm by whalers (Densmore, 1939). The Makah name is given by Gunther (1973) as "**k'lik'lixuse'uk**" (lit. "red top plant"). One Nootka name, however, is said to be derived from the word for mothers' milk (Fenn *et al.*, 1979), and is undoubtedly a form related to the Nitinaht name. Children sucked the nectar from the corolla tubes in the same manner (Fenn *et al.*, 1979).

SOLANACEAE (NIGHTSHADE FAMILY)

Solanum tuberosum L. (White, or "Irish" Potato)

qa·wic (JT)

Potatoes were apparently introduced to the Nitinaht area around the 1870s. They were brought in in large sacks. Seed potatoes [called **qa·wicaba·ʔχ** (lit. 'it's going to be a potato')] were provided by the Indian agent and were grown around Clo-oose (JT: see also Appendix 4).

URTICACEAE (STINGING NETTLE FAMILY)

Urtica dioica L. (American Stinging Nettle) (Figure 81)

ʕesipt (cf. **ʕesibaqk** 'rash') (IJ, CJ, JT, LJ)

The Nitinaht did not eat nettle greens as a food (JT) although they were eaten by visiting Europeans in the early trading days (cf. Turner, 1978). The Nitinaht, like virtually every other Northwest Coast group (Turner, 1979) used the stem fibre of nettle in making twine, fishing lines, and netting (JT). The stems were harvested in fall, when the plants were fully mature, and dried. They were then pounded to separate and soften the fibrous tissue. The fibres were then spun together on the bare thigh, a process called **bi·tibi·t** (see also red cedar—*Thuja plicata*). Often, the fibre from the inner bark of cottonwood (*Populus balsamifera* ssp. *trichocarpa*) was spun with the nettle fibre.

Fig. 81 Stinging nettle *(Urtica dioica).* (Robert D. Turner)

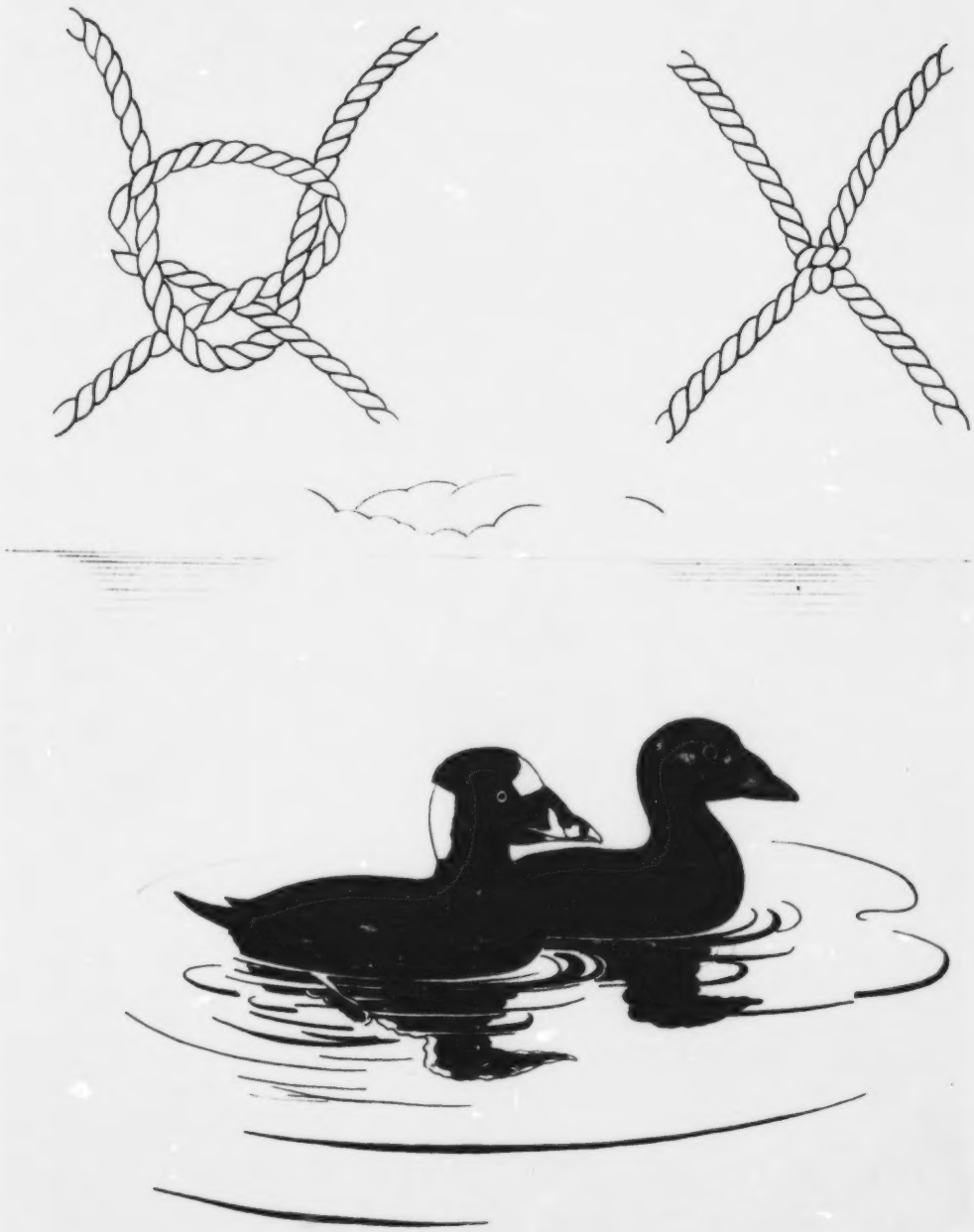

Fig. 82 Top: Sheet-bend knot, used in nets for catching fish and ducks. Bottom: Surf scoters, or "black ducks", the type commonly caught in Nitinaht duck nets. (Drawing by Elizabeth J. Stephen)

Fig. 83 Duck net at Whyac in position across the Nitinat Narrows, as described by John Thomas. (Drawing by Elizabeth J. Stephen)

The finished, spun nettle yarn was called **bitiyu·**. [These terms are applied to the spinning and finished product of any fibrous material, including wool (JT)]. Nettle twine was used for various binding and sewing purposes, such as in the stitching together of tule mats (see *Scirpus acutus*). Nettle-cottonwood fibre line was used for the "leader" portion of halibut and other types of fishing lines and, for this use, was usually dyed brown with hemlock bark dye (see *Tsuga heterophylla*). Sometimes it was rubbed with the leaves and stems of giant vetch (*Vicia gigantea*) to eliminate the human odour from the line. This had the effect of staining it greenish (JT). Dipnets for herring were of fine-meshed nettle fibre string (Arima, 1982).

One of the most interesting uses of nettle-cottonwood twine was for duck nets. These were made using the same basic construction methods as fishing nets. The mesh was about 4 to 5 cm (1.5 to 2 in.) across and the twine was about the same thickness as a standard round-weave shoelace (JT). As with fishing nets, a sheet bend knot was used in net-making because, as JT explained, it holds, no matter which way it is pulled (see Figure 82). The Whyac people used to string up a duck net across the mouth of the Nitinaht Narrows, from the bluff at Whyac village to the opposite bank, a distance of about 25 m (80 ft) (see Figure 6, p. 5). Larger ropes of cedar withes (see *Thuja plicata*) were used across the top and bottom of the net and the bottom was weighted by rocks at intervals of about 4 m (12 ft) (Figure 83). The main species caught by this net was called **kuxʷwa·š**, "black duck" (scoter) (Figure 82), but JT noted that any kind of duck trapped in the net would be used. After the net was strung up, some people would go a short way up the Narrows and scare the ducks, which would then fly out towards the ocean and become ensnared in the net, their heads passing through the mesh. Formerly, several hundred ducks could be caught at one time by this method. Once the birds were trapped, people from the village waiting at the north side of the Narrows would detach and drop the line holding up the net, and the entire net, with ducks still entrapped, was hauled up the bluff at Whyac. Then, as explained by JT, everyone in the village would come to clean and pluck ducks. After the birds were plucked, the down was singed off and they were steam-cooked in pits or split in a similar manner to Chinese-prepared duck and roasted on sticks over the open coals. After the ducks were cooked, a large feast was held. Often, cinquefoil roots (*Potentilla pacifica*) and clover rhizomes (*Trifolium wormskioldii*) were eaten as an accompaniment with the duck (JT).

The people at Clo-oose had no suitable place for catching ducks. They used to come up to Whyac and have the ducks caught for them. Then, with much ceremony, they would pay for the ducks with halibut or some other food. (IJ explained that the Clo-oose people fished more halibut than the people at Whyac, because the former did not have the same difficulty in co-ordinating their movements with the tides. At Whyac, the people had to wait for slack tide before they would cross the bar at the mouth of the Narrows.)

JT's uncle, a Makah from Neah Bay, used to rub his hands with stinging nettle before he touched his fishing gear (see also giant vetch—*Vicia gigantea*). This was to eliminate the human smell (JT).

JT said the young shoots of stinging nettle were chewed and swallowed as a tonic, to keep one from getting sick, but warned that one must be careful to get the very youngest plants, that are not yet "fuzzy", or he would get a rash in his mouth.

LJ recalled that those suffering from rheumatism and arthritis were beaten all over their bodies with stinging nettle, until their skin was covered by a rash. This was said to cause the pain of the arthritis or rheumatism to "come out." The same treatment was taken by a person to ensure the continued affection and faithfulness of his or her spouse. A whaler hunter's wife would take this treatment before her husband went out hunting, to cleanse herself so that he would have a successful hunt (LJ). LJ commented that there were many other medicinal uses of stinging nettle but that these were secret and were known only to certain individuals and not generally used.

The Makah rubbed nettles on the body when handling a corpse, for purification (Gunther, 1973). Nootka whalers, seal hunters, and fisherman rubbed nettles on their arms to give them strength, and also used them as a poultice for arthritis and other types of sores and aches (Ellis and Turner, 1976; Fenn *et al.*, 1979; Turner and Efrat, 1982).

The Makah name for nettles, "**kalū′pki**" (Gunther, 1973) is linguistically unrelated to the Nitinaht name. There is, however, a definite relationship between the Nitinaht and Nootka [cf. Hesquiat, for the beaten, prepared fibre—**ʕayi·s**, and Hesquiat and Manhousat for the plant—**ʕi·ɬmakt** (Turner and Efrat, 1982; Ellis and Turner, 1976.)] It seems likely that the Nitinaht term was borrowed from Nootka, rather than vice versa.

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Appendix 1. Nitinaht Plants Unidentified Botanically (in alphabetical order of their Nitinaht names)

bayaɬsiʔ (IJ, LJ). (possibly *Pellia* sp., a liverwort) The name of this plant is derived from its medicinal use. When one had a pain somewhere in his body, this was called **baya·ɬ**. This plant would be gathered, taken home, washed, and chewed up and swallowed immediately. This would stop the pain (IJ). However, IJ warned that if it is kept in the mouth too long before being swallowed, it would cause soreness and blistering of the lips. The medicine derived from this plant was called **bayaɬsʔi·** (JT). LJ also knew of this plant but did not recall whether it was taken internally. However, she remembered one lady who rubbed herself with the plant to cure herself of sickness caused by an evil medicine man. (JT explained that certain medicine men were evil and could cause sickness by blowing some bone or object into one's body.)

There is some confusion over the actual features of this plant. LJ said that it was "kind of rare." IJ said that the plant was small and dark green and that it grew in the deep shade, right on the ground. The leaves, she said, were oblong, and were not marked in any way. LJ, too said that it grew right on the ground at the sides of a road or path, and that it had no flowers. However, she said the leaves were round. IJ said that the leaves were in a bunch, but each one was separate. Both agreed there was no smell to it, but IJ said that it tastes strong when chewed. She said it used to grow at Port Renfrew, on the western side of the graveyard at the Reserve. She further noted that grouse like to eat it; when she opens up a grouse to clean it, "they're just full of it." There is good circumstantial evidence to conclude that this is the thallose liverwort, *Pellia*. However, the Hesquiat Nootka, who called *Pellia* **ʔiʔiʔipaɬkuk** (lit. 'resembling fish-scales'), use the juice and chewed-up pulp of this plant as a medicine for a child or infant with a sore mouth or throat. This use would be contrary to IJ's evidence that the plant called **bayaɬsiʔ** causes a sore mouth. No equivalent type of plant was described for Makah by Gunther (1973) or Densmore (1939).

ʔiʔidičč̓a· (lit. 'growing on the rocks') (LJ). LJ gave this name when she was shown a specimen of *Peltigera aphthosa* (see under LICHENS). She said the plant looks like *P. aphthosa*, but has white flowers. It was chewed and swallowed as a remedy for tuberculosis (LJ). It is possible, however, that IJ was mistaken concerning the white flowers and that **ʔiʔidičč̓a·** is in fact a thallose lichen, possibly *P. aphthosa* itself. Densmore (1939) mentions a plant named "**didi'dichia**" (lit. "growing on the rocks"—her transl.), which she identifies as "*Sticta* sp. (a lichen)" (see also *Peltigera canina*, p. 55).

IJ described another unidentified plant, that looked something like the fungus *Coriolus versicolor*, but grew on the rocks in damp places, possibly also a thallose lichen (see also *Peltigera canina*, p. 55). She said that the plants were "small ones . . . grey, some of them" and that they were ". . . stuck, . . . like there's something underneath to hold them on the rocks" (IJ) She described its use as follows: "When I was a little girl, . . . there was a man sick. He couldn't pass the water [urinate] and . . . he was suffering, and this old lady asked me to go with her. We went up, right up the stream . . . and there was a rock. That's full of it. She started picking it, and she washed it, and she squashed it up and let him swallow it. Well, I think he swallowed about three times, and about half an hour [later], it worked. He passed the water. He was almost dying, yes. There wasn't any doctor . . . The people . . . had their own medicines—good [ones]—before . . ." This may well be *Peltigera canina* (dogtooth lichen) or some closely related species, which was named by both MT and LJ, but neither of these women knew of any use for it."

Appendix 2. Annotated List of Some Species Occurring Within Nitinaht Territory, for which no Names or Uses Were Known (listed in alphabetical order of scientific name; introduced species marked with an asterisk *). See also discussion on Nitinaht Nomenclature and Classification of Plants.

Abronia latifolia Esch. (Yellow Sand-verbena)—Gunther (1973) noted that the large roots were eaten by the Clallam and Makah, in the fall, and that they were compared by some with sugar beets. Although this plant is growing on the dune south of Clo-oose, JT knew of no name for it and had not heard of the roots being eaten. It should also be noted that this species is rare and restricted in range in British Columbia, and hence should not today be considered as a food source.

Amelanchier alnifolia (Nutt.) Nutt. (Saskatoon Berry)—This shrub is found along the coast both at Whyac and Port Renfrew, but none of the Nitinaht elders knew of a name for it, or recalled whether the berries were eaten (IJ, CJ, LJ, MT, JT). IJ appeared to confuse it with *Osmaronia cerasiformis* (Indian-plum). Unfortunately, she saw only a flowering branch, not the shrub itself, and remarked that she might be able to recognize it if she could see where and how it grew. The Makah name is not known either, but the Hesquiat Nootka knew it by the name **ƛiʔiɬtup** although, they maintained the plant did not grow in their territory. They obtained the berries from the Gold River and Alberni River area (Turner and Efrat, 1982).

**Anthemis cotula* L. (Stinking Chamomile)—JT saw this plant at Whiffin, near Sooke, and remarked that it could often be seen near where wild clover (*Trifolium wormskioldii*) was found.

Aquilegia formosa Fisch. (Red, or Sitka, Columbine)—IJ, CJ, and JT recognized the showy blooms of this plant, but called them only **lu·lu·čχq**, the general name for 'flowers'. No name or use was known by the Hesquiat Nootka either (Turner and Efrat, 1982).

Armeria maritima (Miller) Willd. (Thrift)—IJ and CJ, when shown a specimen of this plant from the Port Renfrew area, noted the similarity of the leaves to those of wild onion (*Allium cernuum*). IJ commented, "That's pretty, that's nice. Should make a [garden] plant out of it."

Boschniakia hookeri Walpers (Ground Cone, or Poque)—This small, cone-like, parasitic plant was well known to the Central Nootka, who called it **ṗo·q** and ate the corm-like root (Turner and Efrat, 1982; Fenn *et al.*, 1979). No specimen could be found to show the Nitinaht consultants, but JT did not recognize it from a photograph of the plant or by the Nootka name. On a later occasion, however, JT mentioned "a sort of bulb-like root growing on salal," which his mother (IJ) told him about. It was eaten in JT's childhood. This description seems to fit *Boschniakia*, which usually grows on salal, but the name given by IJ for the bulb, **kʷaxapχ**, was used earlier by IJ for tiger lily, and may have applied originally to mission-bells (see *Lilium* and *Fritillaria*).

Carex macrocephala Willd. (Big-headed Sedge)—This short, prickly-fruited sedge grows on the sand dune south of Clo-oose but, although JT recognized it, he knew of no name or use for it. Some Nootka basket-makers used to float the plants in the water in which basket "grass" was soaking, to bring the user of the basket being made good luck (Fenn *et al.*, 1979).

Chrysanthemum leucanthemum* L. (syn. *Leucanthemum vulgare* Lamarck) (Ox-eye Daisy)—Called simply **lu·lu·čχq 'flowers' by IJ, CJ, and JT.

Claytonia sibirica L. [syn. *Montia sibirica* (L.) Howell] (Siberian Miner's-lettuce, or Spring Beauty)—Not used, according to IJ, CJ, JT, and MT, and called by the general term for "flowers". Densmore (1939) gives the Makah name as "**kakawus**'", meaning "remedy for use in childbirth." The entire plant was chewed and swallowed to hasten or induce labour, and the pounded plant was applied to the abdomen as a remedy for constipation (Densmore, 1939). The Hesquiat Nootka called it **ʕiʕanmiʔaqχ** (lit. 'snail/slug inside') and used it as a poultice for cuts and sores and applied the stem juice to sore, red eyes (Turner and Efrat, 1982).

Codium fragile (Suringar) Hariot (Staghorn Seaweed)—only MT and JT were shown a specimen (fresh) of this green alga but neither knew of a name or use for it. The Hesquiat Nootka called it **ǰu·ǰu·paɬʔi·k** (lit. 'always warm') but did not use it for anything (Turner and Efrat, 1982). It was apparently used medicinally by some Nootka whalers (Fenn *et al.*, 1979).

Cornus nuttallii Audubon ex T. & G. (Western Flowering Dogwood)—JT recognized this tree but noted that it is not found in Nitinaht territory, nor did she know of a Nitinaht name for it.

Conioselinum pacificum (S. Wats.) Coult. & Rose (Pacific Hemlock-parsley)—IJ confused a specimen of this plant with one of *Oenanthe sarmentosa* (water-parsley—see main text, p. 93). MT and JT knew of no name or use for it.

Crataegus douglasii Lindl. (Black Hawthorn)—No specimen of this shrub was found as a sample to show the Nitinaht consultants but JT was shown a photograph. She did not appear to recognize the plant even by its characteristic sharp thorns.

Dicentra formosa (Haw.) Walpers (Pacific, or Wild Bleedingheart)—When shown this plant, IJ commented that it grew in the Port Renfrew area but not near Whyac. She, CJ, and JT knew it only by the general name for "flowers" and knew of no use for it.

Distichlis spicata (L.) Greene (Pacific Salt Grass)—This grass was growing in dense patches at the Cheewhat River estuary but JT did not seem to recognize it. She knew of no name for it, other than the general term for "grasses" (see Appendix 4).

Drosera anglica Huds. (Great Sundew), and *D. rotundifolia* L. (Round-leaved Sundew)—Both species were found in the bog around the edge of Whyac Lake but JT did not recognize them; neither did MT, who was shown a sample.

Geum macrophyllum Willd. (Large-leaved Avens)—This plant was recognized by the Nitinaht consultants (IJ, CJ, JT, MT) but none knew of a name or use for it. The Hesquiat Nootka called it **ti·čsy̓a·piqsy̓i** (relating to the womb) and used the leaves as a medicine for childbirth and for stomach pains (Turner and Efrat, 1982).

Gentiana douglasiana Bong. (Swamp Gentian)—This plant was growing in the bog at Whyac Lake but was not recognized by JT.

Glaux maritima L. (Sea-Milkwort)—This plant was a common element of the beach flora in both Nitinaht and Port Renfrew areas. However, no name or use was known for it (JT, MT, IJ).

Honkenya peploides (L) Ehr. (Seabeach Sandwort)—Only JT saw a specimen of this beach plant and he did not know of any name or use for it.

Hypericum anagalloides Cham. & Schlecht. (Bog St. John's-wort)—Found growing at the Whyac Lake bog but not recognized by JT.

Juncus effusus L. (Common Reed)—IJ and JT recognized this reed, but IJ noted that it was too brittle to be of any use as a fibrous material. The Hesquiat Nootka called it **ƛi·ʔič** (the Makah name for *Xerophyllum tenax*—bear-grass), and used it occasionally for tying and binding (Turner and Efrat, 1982).

Kalmia polifolia Wang. [syn. *K. microphylla* (Hook.) Heller] (Western Swamp-laurel)—This common bog shrub was found around Whyac Lake. It's similarity to *Ledum groenlandicum* (Labrador-tea) was recognized but no name or use was known for it (JT, MT, IJ).

Mentha arvensis L. (Field Mint)—No name or use for this native plant was known to JT or MT. Notably, a domesticated peppermint (*Mentha piperita* L. variety) is common as an escape around Whyac village and, although it was recognized, no name or use was known (JT, MT). It was much appreciated by our field party, however, and became a favourite source of tea.

Mimulus guttatus D.C. (Common Monkeyflower)—IJ and CJ called this by the general term for "flowers". IJ commented, "There's lots at Nitinat. They're pretty flowers. We don't have a name for this. They're just flowers in our language."

Moneses uniflora L. (Single Delight, or One-flowered Wintergreen)—Only JT actually saw a specimen of this plant and he did not recognize it. The Makah name is given as "**kiki'tcidoas**" (lit. "growing on rotten logs"), or "**tloho'chiklis**" (lit. "covered by something"), this latter name apparently referring to its use as a poultice for an abscess, for which it was placed inside a cone shell. An infusion was drunk for a cold (Densmore, 1939). The plant may well have been used medicinally by the Nitinaht also.

Monotropa uniflora L. (Indian-pipe)—Only LJ and JT were shown a specimen of this plant and this was of the dead stalks. Neither recognized it.

Myrica gale L. (Sweet Gale)—This shrub was growing in profusion along the margins of the Cheewhat River flats but JT did not recognize it. MT remarked on the pleasantly pungent aroma of the fruits but knew of no name or use for the plant.

Oxalis oregana Nutt. (Wood Sorrel)—This plant is reported to occur near Nitinaht Lake (J. Hamilton, pers. comm.), but no samples were available to show the Nitinaht consultants. The Makah name is "**tcaiba'kcun**", meaning "sour", who sometimes ate the whole plant fresh or lightly cooked for "summer complaint" (Densmore, 1939).

Lycopus uniflorus Michx. (Northern Water Horehound)—This species was growing in the bog at Whyac Lake but was not recognized by JT or MT.

Pellia sp. (Thallose Liverwort)—No name or use was known to JT or MT, but this may be the unidentified plant, **bayaɬsiʔ**, described by IJ and LJ (see Appendix 1). This liverwort is very common in the forested areas around Whyac.

Physocarpus capitatus (Pursh) Kuntze (Pacific Ninebark)—This shrub, which is found at Whyac, was recognized by JT and MT but no name or use was known for it. IJ and CJ confused it with "ironwood" (see *Holodiscus discolor*). The Hesquiat Nootka called it **piɬpiċaqmapt** (lit. 'plant with bark resembling red cedar inner bark'), and used the bark as a stain to darken cedar bark, the wood for making some small items such as toy bows, and the bark to make a decoction used externally as a wash for rheumatic pain and taken internally as a laxative and emetic (Turner and Efrat, 1982).

Plantago macrocarpa Cham. & Schlecht. (Alaska Plantain), and *P. maritima* L. (Sea Plantain)—The first species was found in the bog at Whyac Lake; the second was common along the shoreline in the Nitinat area and at Port Renfrew. No name or use was known for either (JT, MT, IJ, CJ).

Prunella vulgaris L. (Common Self-heal)—No name or use was known to IJ, CJ, or JT.

**Ranunculus repens* L. (Creeping Buttercup)—This common weedy buttercup was recognized by CJ and IJ but no name or use for it was known. The Makah used one species of *Ranunculus*, possibly this one, for a blister-inducing poultice to treat sores (Densmore, 1939). The Hesquiat used *R. repens*, and possibly other *Ranunculus* species as well, for the same purpose (Turner and Efrat, 1982).

Ranunculus uncinatus D. Don (syn. *R. bongardii* Greene) (Small-flowered Buttercup, or Bongard's Buttercup)—no name or use was known for this plant by IJ, CJ, and JT. The Makah used a poultice of the mashed stems and leaves over an injury to prevent blood poisoning. It caused a blister (see previous species) (Densmore, 1939). [Note: the plant identified in Gunther (1973) as *Ranunculus reptans* L. is actually Pacific cinquefoil (see *Potentilla pacifica*)].

Ribes laxiflorum Pursh (Trailing Black Currant)—This species grows both in the Nitinaht area and near Port Renfrew but no name was recalled for it by IJ, CJ, or JT (see further discussion under *R. bracteosum*—stink currant, p. 113).

**Rumex acetosella* L. (Sheep-sorrel)—IJ called this by the general name for "flowers". She had not heard of the leaves being eaten, although Hesquiat children used to chew them for their tangy flavour (Turner and Efrat, 1982).

Rumex occidentalis S. Wats. (Western Dock)—IJ commented, when she was asked about this plant, "I always see the leaves, but I don't know what we call it. There's no name for it." Densmore (1939) noted that a closely related species, *R. obtusifolius* L., was called "**huap'si**", meaning "breaks up a plan", by the Makah and was used by them as a medicine "used when a person was conscious of being near an enemy which meant death. The fresh roots were pounded and rubbed on the body. A man would pay from five to ten blankets for one application of this remedy. When 'given out' this and similar plants were pounded and fixed so they could not be recognized." (Densmore, 1939). The Hesquiat Nootka knew of no name or use for *R. occidentalis* (Turner and Efrat, 1982).

Salicornia virginica L. (American Glasswort)—Although this plant is common along the ocean shoreline throughout Nitinaht territory, no name or use for it was known to IJ, CJ, JT, or MT. Apparently, neither the Makah, nor any of the Nootka groups studied thus far, have a name or use for the plant. (Gunther, 1973; Densmore, 1939; Ellis and Turner, 1976; Fenn *et al.*, 1979; Turner and Efrat, 1982).

Sanguisorba canadensis L. (Sitka Burnet)—This plant was growing in the bog at Whyac Lake but was not recognized by JT.

Appendix 2—Continued

Scrophularia californica Cham. & Schlecht. (California Figwort)—The similarity between this species and hedge-nettle (see *Stachys cooleyae*) was noted by CJ, IJ, and JT, but no name or use was known for it.

Sedum divergens S. Wats. (Stonecrop)—JT recognized this plant from a photograph but knew of no Nitinaht name or use for it. At least some Nootka peoples ate the leaves, after steam-cooking them (Fenn *et al.*, 1979). The Haida and other Northwest Coast peoples also ate them (Turner, 1975). The Makah called one species (*Sedum* sp.) "**cha'chakli**" (meaning "filled with water") (Densmore, 1939), or "**tcatca''kɬk**" ("water plant") (Gunther, 1973), and used to eat the leaves on journeys if there was any doubt as to the safety of the local water (i.e., if it might be rendered harmful by malicious spirits) (Gunther, 1973). Additionally, a Makah woman chewed and swallowed the leaves to 'bring on her periods' (Densmore, 1939).

Sorbus sitchensis Roemer (Sitka mountain-ash)—JT was the only one shown a specimen of this plant and he knew of no Nitinaht name or use for it.

Spiraea douglasii Hook. (Hardhack, or Douglas' Spiraea)—Neither MT nor JT knew of a name or use for this shrub. It is not mentioned for Makah by Gunther (1973) or Densmore (1939), nor for Hesquiat Nootka (Turner and Efrat, 1982). George Louie of Ahousat said that the name in that dialect meant "looks like a caterpillar", but knew of no use for it (Fenn *et al.*, 1979).

**Stellaria media* (L.) Cyrillo (Common Starwort, or Common Chickweed)—IJ, CJ, and JT knew of no Nitinaht name or use for this common weed.

**Tanacetum vulgare* L. (Common Tansy)—IJ, when shown this plant commented, "Oh, we don't have a name for this. I don't think there's any around here. That's a nice smell!"

Taraxacum officinale* Weber (Common Dandelion)—IJ, LJ, MT, and JT all agreed that there was a Nitinaht name for dandelion; however, none could remember it. LJ noted that it was common in the Whyac area. The Hesquiat Nootka called dandelion **ʔiʔičaqχ (lit. 'white inside'), from the white stem latex, exuded when the stems are broken (Turner and Efrat, 1982). The Nitinaht name apparently did not relate to this feature of the plant (JT).

Tiarella trifoliata L. (Trifoliate-leaved Foamflower)—This plant was common at the Pacheenaht Reserve Campground at Port Renfrew but no name or use was known to IJ, CJ, or JT. (see also *Tolmeia menziesii).*

Tofieldia glutinosa (Michx.) Pers. (Sticky False Asphodel)—This plant was growing at the Whyac Lake bog but was not recognized by JT.

Tolmiea menziesii (Pursh) T. and G. (Youth-on-age)—No information concerning Nitinaht name or use was obtained but the Makah called this species "**tca'c'wē**" (Gunther, 1973) or "**tcaskwa'abûp**" (Densmore, 1939—applied to an unidentified plant in Saxifragaceae, possibly *Tiarella* sp.). The leaves of the plant named by Densmore were chewed fresh as a remedy for swelling of the legs and body. Gunther (1973) states that *Tolmiea* "sprouts" were eaten raw in spring.

Veratrum viride Ait. (Indian Hellebore)—This highly toxic plant was used medicinally by many British Columbia Native groups but apparently not by the Nitinaht; at least JT did not recognize a specimen of the plant. Some Nootka whalers apparently rubbed the plant on their bodies to strengthen them, and used the root to make an arrow and bullet poison (Fenn *et al.*, 1979). The Makah apparently did not use the plant (Gunther, 1973; Densmore, 1939).

Viburnum edule (Michx.) Raf. (High-bush Cranberry, or Squashberry)—JT did not recognize this shrub by photograph or description but, unfortunately, no live specimen was available as a sample. The Hesquiat Nootka ate the fruits and called them **ṁuṁuk̓ʷaqχ** (lit. 'stone inside') (Turner and Efrat, 1982), but there is no record of their use by the Makah (Gunther, 1973; Densmore, 1939). (See, however, note under Indian-plum, *Osmaronia cerasiformis* and bunchberry, *Cornus canadensis*).

Viola spp. (Wild Violets, both yellow and blue species)—JT knew of no name or use for wild violets. Makah women were said to eat the roots and leaves of *V. adunca* Sm. during labour (Gunther, 1973) but no further details were given.

Appendix 3. Dictionary of General Botanical Terminology in Nitinaht (listed in alphabetical order of English term).*

Bark—**c̓aqabs** (also, 'a scab from a sore or scrape'). If one wishes to specify the type of bark, he mentions the name of the tree: e.g., **ɣubisi·c c̓aqabs** 'red-cedar bark'; or **tu·ɣupati·c c̓aqabs** 'Sitka-spruce bark'.

Basket materials (raw, unfinished grass)—**babuʔ**. (Also applies to partly finished product).

Berries—**qaway** (applied at a generic level to salmonberry—*Rubus spectabilis*). There is also a suffix, **-apɣ**, designating berries. In addition to these, there is a general name for fruit (see under Fruit).

Branch (or limb)—**ƛ̓učaq**.

Bush—**ƛ̓aqpat** (lit. 'leaf'; see also under Plant).

Bushy—see Underbrush.

Cone, of alder or a coniferous tree—**sat̓i·ẇ**. One would specify as to type of cone by referring to the name of the tree.

Core, in the middle of a cone, or in the centre of any other structure (e.g., the pith of an elderberry stem)—**ʕa·ba·qƛ**. (When asked if this might apply to a corn cob, JT laughed and said he guessed so.)

Driftwood—see under log, driftwood and Wood, drift-.

Flower, wild or cultivated—**lu·lučɣq** (lit. 'shiny-tops'). IJ and CJ used this term for a number of wild plant species for which there was no specific Nitinaht name: e.g., *Claytonia sibirica, Aquilegia formosa,* and *Rumex acetosella*—see also Appendix 2.

Grass, and Grass-like Plants—**ʕaqpat**. This term, however, does not include the basket sedge (*Carex obnupta*), and the square-stem bulrush (*Scirpus americanus*), even though these are usually called "grass" in English by the Nitinaht (IJ, CJ, JT).

Knot, of a tree, log, or stump—**c̓aɣat̓a·ʔbc**, or **ƛ̓učqckʷi·**. The first term pertains to the entire portion of a knot, as one might find it in a rotten log or even on the beach (cf. discussion on halibut hook making under western hemlock—*Tsuga heterophylla*). This term is considered the best, or "proper" name for the knot, whereas the second would be applied to a knot in a board, where there used to be a branch, or to a knot visible on the outside of a tree.

Leaf—**ƛ̓aqpat** (also, 'bush', or 'any low plant'), or **ƛ̓aƛ̓aqaqsib** (lit. 'plant growing out of a tree', pertaining to any kind of leaf on a tree). There is no distinction in Nitinaht between needles and broad leaves on trees. The month of October is called "**qa:laloH**," or "falling leaves" (Arima, 1975-76).

Limb—see Branch.

Log, driftwood—ba**ƛ̓a·k**. JT knew of no Nitinaht name for a fresh log lying in the woods or one that had just been cut as, for example, one might see on a logging truck.

Log, rotten—**p̓adaɣu·ʔbc**. This term applies to a very decayed log that is crumbly in texture.

Lump, or burl, on lower part of tree trunk—**hulquʔbčeǰ̓k**.

Lump, on middle portion of log or trunk—**huluqʷa·s**.

Moss, or moss-like plant (including lichens)—**p̓uʔup**.

Needle, conifer—see Leaf.

Pitch—**ʔiɬič̓·y̓p**.

Pitchwood—**ʔiɬkʷi·c**. Pitchwood was considered good for starting fires, and was also used for torches.

Plant (except trees and tall shrubs)—**ƛ̓aqpat**. This term apparently applies only to herbaceous plants, both wild and domesticated. JT noted that one would not use it for ferns, trees, tall shrubs, or seaweeds (Algae). However, see also Bush, and Leaf.

Plant, general—As will be noted throughout the text, the suffix, "**-apt**" is frequently used to designate "plant". Additionally, another segment, "**-q-**", apparently pertains to "plant" when it occurs in a word within some contexts.

Plant, creeping or vine-like—**ɣi·ʔukʷ**.

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* Unless otherwise noted, the information is from John Thomas (JT).

Appendix 3—Continued

Plants, fresh-water—**ċač** (lit. 'of the water', 'in the water').

Plants, marine—see Seaweeds.

Plant, thorny or prickly—**šačkapt** (see thistles—*Cirsium* spp.).

Root—**ƛu?bač**. If one wishes to specify the type of root, he would simply mention the name of the tree or plant: e.g., **χubpati·c ƛu?bač**—'red cedar root'.

Seaweeds, or Marine Algae, general—**ċa·ypiš** (applied at the generic level to red laver—*Porphyra perforata*).

Seed—There is no term for "seed" in Nitinaht. As JT notes, one has to mention what it is going to become. For example, a seed potato would be **qa·wicaba·?ƛ** (lit. 'it's going to be a potato'), a maple seed would be **?ibiċqaptaba·?ƛ** (lit. 'it's going to be a maple tree'), or a flower seed would be **łu·łučχqaba·?ƛ** (lit. 'it's going to be a flower').

Snag, tall and dead—**diχ?aqƛ**.

Stem—**?u·sta·?dɬ**. This word pertains to the stem of a small plant, but not to the trunk of a tree (see also Trunk).

Stump, cut or broken off short—**ʕi·ċu·**.

Timber, or a stand of trees growing together—**šo·yu·čš**.

Tree, general—**šuċas**.

Tree, dead—see Log, rotten.

Tree, base of—**hita?biċs**. This term is also applied to the last house in a row towards up-river (Thomas and Hess, 1978). It pertains to a tree still standing. The butt end of a fallen tree or log is **hita?bč**.

Tree, fallen—**?u·wa·s**.

Tree, bushy, with many branches—**ƛu·čqa·?dɬ**. An example of such a tree would be one that would be suitable as a Christmas tree.

Tree, straight, with few branches—**ƛu·ɬa?dɬ**. An example would be a red cedar that is good for harvesting the bark of it.

Trunk, of a tree—**?u·sa·?dɬ** (see also under Stem). This term actually applies generally to the length of anything standing up, such as the human body. Another term is **hitabič**.

Underbrush—**yu·bu·kʷ**. This applies to anything growing under the trees that one has to walk through. The name *Youbou* (on the north side of Cowichan Lake), is derived from the Nitinaht name for "bushy place."

Wood—**?adksi?**.

Wood, drift—(from the beach)—**ṗackʷi**; driftwood from the edge of the river—**ċackʷi**.

Wood, rotten—**ṗatχabs** (This would apply to a handful of rotten wood, or rotten wood itself from a dead tree or rotten log. The condition of rotteness in wood is **ṗatχak**.)

Appendix 4. Names of Some Introduced Plants and Plant Products in Nitinaht (listed in alphabetical order of English Name).*

Apple (*Malus* spp.) **ha·plis** (borrowed from English "apples").

Bamboo (*Bambusa arundinacea* Willd.)—**kukʷxu·ẇad** (lit. 'holes intermittently along the length'; also 'ladder'); or **bubši·ẇad** (lit. 'partitions along the length'). Bamboo was often found as driftwood, and was used by the Nitinaht for knitting needles, crochet hooks, and whistles.

Beans (*Phaseolus vulgaris* L.)—**wawacq̓aq̓ḵʷ** [lit. 'resembling (little olive) shell'; cf. **waca·y̓**—purple olive (*Olivella baetica* Carpenter), and other similar shells)]. This name was applied to all types of beans: navy, kidney, lima, and even green beans.

Blackberries (*Rubus procerus* P. J. Muell., and *R. laciniatus* Willd.)—berries, **qaqawišaḵʷ** (lit. 'resembling salmonberries'); and bush—**qaqawišaḵʷapt**. Blackberries were eaten by the Nitinaht in recent years, whenever they could be obtained.

Burdock [*Arctium minus* (Hill) Bernh.]—**ḵʷitiḵʷtšapt** (lit. 'sticky plant'). (See also main text, p. 97).

Canteloupe (*Cucumis melo* L.)—**kaka·laχckaḵʷ** (lit. 'resembling skull'; cf. **ka·laχckʷ** 'skull').

Carrots (*Daucus carota* L.)—**ƛiƛi·χa·ʔdɬ** (lit. 'red along the length of it').

Celery (*Apium graveolens* L.)—**qiqistu·paḵʷ** (lit. 'looks like cow-parsnip'). This name was also applied to garden rhubarb.

Cherries (*Prunus* spp.)—**kakaksiku·ɬ** (lit. 'having stems on the midsection').

Coffee (*Coffea arabica* L.)—**kʷa·pi** (borrowed from English "coffee").

Flour—**saplil** (borrowed from Chinook Jargon) (also applied to bannock). Note also, bread—**paɬpa·waca·qχ** (lit. 'looks like a bee's nest inside'), and cookies, donuts, or sweet rolls—**čačabe·y̓qχ** (lit. 'sweet inside'; cf. **čabas** 'sweet').

Figs (*Ficus carica* L.)—**kʷakʷadsaḵʷ** (lit. 'looks like camas bulbs'; cf. **kʷa·dis** 'camas bulbs'—see *Camassia* spp.). The Hesquiat Nootka use a cognate form of this term (Turner and Efrat, 1982).

Gooseberries (*Ribes* sp.)—called by the same term as wild gooseberries, **ƛabu·xʷay** (see *Ribes divaricatum).*

Grapes (*Vitis vinifera* L.)—**diχapχ** (lit. 'bunch of round objects'); grape-vine—**diχapχapt**.

Hops (*Humulus lupulus* L.)—**sasaƛi·aḵʷ** (lit. 'looks like a cone'—see Appendix 3). When JT was young, the entire village group used to travel to Yakima to work as hop-pickers during the harvest season.

Lemon [*Citrus limon* (L.) Burm.]—JT did not recall the Nitinaht name but remembered that it was something to do with "sour".

Loganberries (*Rubus* sp.)—berries, **hahaca·qawχ** (lit. 'long-faced ones'); and bush—**hahaca·qawχapt**.

Onion, garden (*Allium cepa* L.)—**q̓iyaq̓iya·** (also applied to wold nodding onion—see *Allium cernuum*).

Oranges [*Citrus sinensis* (L.) Obs.]—**ʔo·lalčis** (borrowed from English "oranges").

Peach [*Prunus persica* (L.) Batsch]—**čičiʔcitab** (lit. 'cut down the side').

Pear (*Pyrus communis* L.)—**yuyučkskapɬ** (lit. 'tapered at the end'); tree—**yuyučkskapɬapt** [a cognate form used in Hesquiat Nootka (Turner and Efrat, 1982)].

Peas, dried and split (*Pisum sativum* L.)—**ƛiḵiʔd** (meaning unknown—JT).

Plums (*Prunus domestica* L.)—**ƛiƛidičqɬ** (lit. 'stone inside').

Potato (*Solanum tuberosum* L.)—**qa·wic** (identical form used in Hesquiat Nootka—Turner and Efrat, 1982)—see also p. 128.

Raisins—**li·sins** (borrowed from English "raisins").

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* Unless otherwise noted, the information is from John Thomas (JT).

Raphia, or Raffia (*Raphia* sp.)—**q̓a·ya·č**. The tough, smooth leaf tissue of this plant, in the Palm Family (Palmaceae), is sold in almost any craft store and is often used by Nitinaht basket weavers to form the foundation, in whole or in part, of the small, wrapped, twined baskets. Sometimes it is used just around the woven bottom, to keep the weaving tight, and again at the top to finish off the upper rim. IJ pointed out that a weaver might make a basket with only the two types of "grass"—the raphia and the tall basket sedge (see *Carex obnupta*). Dyed raphia can also be purchased, but usually the natural colour, a light straw colour, is used.

Raspberries (*Rubus idaeus* L.)—berries, **qaqawšaḵ̓kʷ** (lit. 'looks like salmonberries'); and bush—**qaqawšaḵ̓kʷapt**. These names are also applied to the domesticated and introduced blackberries.

Rhubarb (*Rheum rhabarbarum* L.)—**qiqistu·paḵ̓kʷ** (lit. 'looks like cow-parsnip'—see *Heracleum lanatum*). This name is also applied to garden celery.

Rice (*Oryza sativa* L.)—**la·yis** (borrowed from English "rice").

Rose, Garden (*Rosa* sp.)—hips, **papatʕayḵ̓kʷ** [lit. 'looks like (wild) rose hips'—see *Rosa nutkana*].

Strawberries, Garden (*Fragaria* spp.)—berries, **ɬuʔulq**; and plant—**ɬuʔulqapt**. These names are the same as for wild strawberries (*Fragaria* spp.).

Sugar, white—**šu·kʷʔa·** (borrowed from English "sugar").

Sugar, brown—**tiɬti·č** [lit. 'alive (reduplicated)', so named because the granules "move around" when one first opens the bag.

Syrup—**salap** (borrowed from English "syrup").

Tea [*Camellia sinensis* L.) Kuntze]—**ti·** [borrowed from English "tea"—see also Labrador-tea (*Ledum groenlandicum*)].

Tobacco (*Nicotiana tabacum* L.)—**qʷiša·** (lit. 'smoking'—said to be borrowed from Nootka).

Turnips (*Brassica rapa* L.)—**ʔilawuʔ** (meaning not known—JT).

Watermelon (*Citrullus vulgaris* Schrad.)—**čič̓tiḵ̓ʷis** (lit. 'lying down on its side'). A cognate form used in Hesquiat Nootka (Turner and Efrat, 1982.).

Appendix 5. Orthographic System for Nitinaht Terms

The phonetic orthography used by the authors to cite vocabulary consists of a set of symbols which label each distinctive speech sound in the language. Since there are many sounds which do not occur in the English language, a chart has been included to show each orthographic symbol and indicate its particular point and manner of articulation (production) in the vocal tract.

Nitinaht Speech Sounds

	Labial	Alveolar	Alveopalatal	Lateral	Velar	Rounded Velar	Uvular	Rounded Uvular	Pharyngeal	Glottal
Plain stops and affricates	p	t,c	č	ƛ	k	kʷ	q	qʷ	ʕ	ʔ
Glottalized stops and affricates	ṗ	ṫ,č̓	č̓	ƛ̓	k̓	k̓ʷ	(q̓)	(q̓ʷ)		
Voiced stops	b	d								
Voiceless fricatives		s	š	ɬ	x	xʷ	χ	χʷ	(ḥ)	h
Nasals, glides, and liquids	(m)	(n)	y y̓	l l̓		w w̓				

Sounds in parentheses ( ) do not occur frequently.

Vowels: i, i·, e, e·, a, a·, u, u·

In comparative citations the reader will note the following nonidentical sound correspondences.

Nitinaht	Makah	Nootka
ʕ	q̓/q̓ʷ	ʕ
χ/χʷ	χ/χʷ	ḥ
l	l	n
b	b	m/m̓
d	d	n/n̓

Appendix 6. The Harvesting and Preparation of "Root" Foods, from an Interview with Ida Jones, taped and translated into English by John Thomas. (For a less literal translation of these passages, see Plant Foods discussion, p. 13).

A. *Digging "Roots"*

ƛawa·ʔƛ̓a	**qʷiyiƀƛaqiyik**	**ʔuʔa·tx̣**	**ƛicsap**	**hidasƛ**
it is nearly time	when they use to	gather	cinquefoil roots	came time to

da·či·ɬ	**ʔu·yuqʷ**	**k̓ʷa·x̣ši·ƛ̓ƛqʷiy**	**ƛ̓aqpatk̓ʷaq,**	**yuwaʔƛ**
watching	to[wards]	faded away	it's leaf	and then

ʔuʔa·taxšiƛ̓ƛ	**ƛicsap**	**ʔu·caxadaʔƛ**	**wi·qpɬe·kʷiy**
start gathering	cinquefoil roots	for when	it is becoming winter

ʔuʔye·kqʔa	**ʔuʔu·kʷsaʔƛ**	**ʔudu·ƛ**	**ƛušsʔaptqʔa**
he will then	eat it,	because	he dried it,

yuwaʔƛ	**ʔukʷiči·da·ʔƛ**	**qaʔawc̓aq,**	**ƛ̓apa·ɬaq**
and then	he put it into	the pack basket,	the storage basket

ʔuwiyaʔƛ	**ya·**	**yaɬaxx̣a·wqʷiy**	**wik**	**pa·sšiƛ**
then put it	that	where ever it might	not	get mouldy

ʔuʔukʷsaʔƛa	**ʔax̣c**	**haʔukʷ,**	**ʔu·ča·ɬksaʔƛ̓a**
what he was eating	that	eat	eating it with then

ʔuʔu·kʷsaʔƛqʷiy	**se·miṅaq**	**ƛ̓ušču·,**	**ƛ̓uša·k̓aq**
when he eats	salmon	dried fish	the dry

haʔub	**wa·x̣x̣aʔs.**	**ƛiscs̓paq,**	**ʔaƛisa·ʔdax̣a**	**ʔax̣cíʔ**
fish	I meant to say	cinquefoil roots	two kinds	that one

qa·kačisaʔdax̣a·kid	**ʔax̣číʔ,**	**ƛicsap,**	**ʕeʕciy̓**
three kind we have	that one,	cinquefoil roots,	large-leafed clover roots

ʔiš	**naxu·**	**ʔu·x̣ʷawa·ɬ**	**ʔuʔa·tx̣ʷ**	**ƛapey̓k**
and	small-leafed clover	using	to gather	root (digging stick)

ʔuʔu·ʔbx̣čʔaƛkʷqʷiy	**ʔadi·qx̣a·wakqʷiy**	**wi·qpaɬšƛ**
when he has enough	as many as he needed	when winter comes

yuwaʔƛ	**ʔu·šči̓diƛ̓ƛ,**	**ʔukʷa·siƛ̓ƛ**	**ƛ̓a·x̣ap̓aq**
and then	is put into container	put up onto	the shelf

wi·k̓ex̣	**pa·sšiƛ.**	**ʔukʷaqɬaq**	**šiƛa·,**	**ƛicsapʔiš**
so it won't	get mouldy.	The one called	bracken fern roots,	cinquefoil roots

ʕeʕciy̓	**ʔiš**	**naxu·,**	**bu·yisa·ʔdax̣**	**wi·qpɬiye·y̓k**
large-leafed clover	and	small-leafed clover	four kinds	for winter use

haʔukʷ	**qʷa·saʔƛ**	**qʷa·ʔaq**	**qa·wc̓aq,**	**qa·wiča ƛkʷqad**
eat	same then	as the	potatoes	our potatoes

ɬax̣	**ʔuy**	**haʔuk̓ʷƛqʷiyid.**
now		when we eat

ʔax̣k	**ʔuyiy̓a**	**ƛaʔu·ƛ̓aq**	**da·k,**	**xatxa·dčiyi·c̓a**
This	when it is	next	month	The women

ʔax̣kíʔ	**ʔuʔa·tx̣ey̓k**	**ƛicsap.**	**ʔudu·ƛ̓a**
This is	for gathering	cinquefoil roots	because

kaʔbatšiƛkʷaʔɬ	**qʷiyi·ƛqʷiyaɬ**	**ti·kʷa**
was known then to them	when they will	dig for roots

ʔadi·qχa·wqʷiy **čabuɬ** **ʔuʔa·tχ**
as many as wild could gather

yaqadu·x̌aq **ʔa·ʔayiščχ** **ʔuʔa·tχaʔx̌qʷiy,** **ʔa·ʔdʔaq**
that's the reason many of them when they start gathering, as long as

x̌isʕa·ʔk **ʔiyaχʔisχ** **l̓i·kʷa** **wik** **hixʷaɬɬuws.** **ʔu·s**
daylight on the sandy ground digging not hurrying Some of

xatxa·ʔčiʔyaq **ha·čack̓ida·k** **l̓i·kʷe·y̓ak̓aq** **ʔu·yuqʷ**
the women has longer her digging stick compared to

qʷa·ʔaq **x̌aʔo·ʔaq,** **haχʷqʷe·ʔa,** **c̓i·tkic̓i·tkaʔp**
how the others are leaning on it, twisting it

hi·takstiʔsaʔx̌qʷiy, **dači·ks** **ʔada·či·yʔax̌kʷqʷiy**
when going into sand, always watchful how far down she has it

yuwaʔx̌ **kibitšix̌x̌** **sawiʔaɬx̌** **sup̓čibsaq**
and then she prys it broke-off The sand

yuwaʔx̌ **χʷackʷe·ya·ʔx̌** **sukʷix̌x̌** **x̌icsp̓aq**
and then broke it up take hold of the cinquefoil root

ʔu·kʷič̓idaʔx̌ **qaʔawack̓aq.** **ʔayči·łšx̌a** **ʔaχciʔ** **qʷa**
putting it into the pack basket. many days that is like that

ʔuʔa·tχ **ʔuʔu·ʔbχiʔax̌kʷqʷiy** **ʔadasibqʷiy**
gathering when she gets enough how much she needs

wi·qpɬaʔx̌qʷiy **hiyo·ʔx̌** **ʔaχc** **ʔudu·x̌χʔiš**
for when its winter she quit that's I guess because

haɬi·ɬsaɬɬ **wi·k̓χ** **qade·** **wi·k̓χ** **wi·wi·qu·kʷ**
invited each other so they won't, ah, so they won't be lonely or sad

ʔudu·x̌ **ʔu·ʔu·qu·kʷqʔa** **ʔu·ʔu·šič̓ida·qk**
because they are then happy passing on news

ʔuʔa·tχaʔx̌qʷiy **x̌icsap̓aq.** **x̌icsap** **ʔiš** **šix̌a**
when they gather the cinquefoil roots, cinquefoil root and bracken fern roots

ʕeʕciy̓ **naxu·** **x̌iɬuqʷšix̌x̌** **du·b** **wi·qpɬiye·y̓ak̓x̌**
large-leafed clover, small-leafed clover put away all for winter use

haʔub, **qʷisiɬsaʔx̌** **qʷa·ʔaq** **qa·wc̓aq** **ʔu·ča ʕksaʔx̌**
food, has it like as the potato eating it with

haʔuk̓ʷx̌qʷiy, **qʷa·ʔax̌k̓ʷaqaɬ** **ɬaχ** **ʔuy** **qa·wc̓aq**
when he eats how they now have at present time the potato

ʔaχc **wikib̓ɬa** **ɬakqʷadk** **ʔu·yuqʷ** **x̌uʔbc̓aq** **haʔub**
that's he wasn't poor as to The root food

huʔe·yib̓ɬaq **qu·ʔas** **daci·ɬ** **ʔudu·x̌** **huʔe·yqʔa**
long ago people, watching because starts early

ʔuʔa·taχšx̌ **hidasix̌x̌qʷiy** **qʷiyiye·y̓akqʷiy**
gathering when it reaches the time when

ʔa·di·siɬsaʔp **k̓ʷaχšix̌** **x̌aqp̓ɬaq** **yuwaʔx̌**
just when dried up the leaf and then

ʔuʔa·taχšix̌x̌ **x̌icsap** **ʔis** **šix̌a**
start gathering cinquefoil roots and bracken fern roots

du·ba?ƛ̓a	**?aɣc**	**ƛ̓iɬuqʷšƛ̓,**	**wi·qpɬiyeɣ̓aƛ̓ƛ**	**ha?uƛ̓ʷt**
all of them	that	being put away	for winter	being eaten

?udu·ƛ	**dači·kisq?a**	**qʷiyiyqʷiy**	**čabułši?ƛ̓t**
because	he is watching	whenever	it could be

?u?a·tɣ,	**hu·hu?aya·p̓aq**	**wiƛ̓ƛ**	**čačabaɣ**
gathered	if too early	it's not	proper (ready)

?uɣʷ	**ya·**	**ƛ̓u?bčaq.**	**?uya?ƛuʷ**	**łaɣti·ɣ̓i?bqʷiy**	
those	that	the root	when he	as soon as it is	

ƛ̓aqši?ƛ	**ƛ̓aqptaq**	**?u?a·taɣši?ƛ̓ƛ**	**ƛicsp̓aq**
start to grow	the leaf	start gathering	the cinquefoil root

yaqiy wik.	**ƛaqši?ƛ̓uw**	**ƛicsp̓aq**	**?u?łači?ƛ̓ƛ**
it's not, is said	when it grows	the cinquefoil	start to put on

ƛ̓u?bač	**wike·yči?ƛ̓ƛ**	**čabas**	**ha?uƛ̓ʷt**
roots	started not	tastes	good to eat

wikeɣ̓akši?ƛ̓ƛ	**ha?ukʷt**	**yaqadu·ƛ̓aq**	**daci·ks**	**?uy**
started not	being eaten	that's why	he watches	when

?u?a·tɣa?ƛqʷiy	**yaqqʷiy**	**qʷabaɣsa·**	**łaɣti·ɣ̓ibƛ**
when he gathers	who ever	wants to do so	as soon as it

ƛ̓a·ƛ̓aqasiƛšƛ	**ƛ̓u?bčaq**	**łači?ƛ̓ƛ.**	**?aɣc**	**qʷa·btid**
start to sprout	the leaf	he let it go.	that's	how we were

we?eƛ̓ƛɣidiš	**čabułˀ**	**?aɣci?**	**qʷa·**	**?uy**	**čabkaća·kqʷiyid**
maybe we still	could	that	be that way	whenever	we could

?u?a·tɣ	**?a·di?daɣsa?ƛid**	**wiƛ̓ƛ**	**čabkaćadiƛkʷ**
gather	only thing we	don't	get a chance to

?u?a·tɣ	**?udu·ƛ**	**?uɣʷa·ƛkʷq?ad**	**babɬa?di·ćaƛ̓kaqad**	
gather	because	we now have	our White man our	

ha?ub	**wikcuƛ̓ʷƛ**	**?a·di·siɬsa?ƛ**	**?uwiyi?t**	
food	easy now	only thing to do	go to	

yaɬaɣɣa·kqʷiyaɬ	**bakeɣ̓k**	**bakʷa·ɬa?ƛ**	**qʷi·siɬsa?ƛ**	
where they have it	for sale	buy it	same as	

qʷa·btaqad	**huʔe·y**	**?u·ɣʷawa·ɬ**	**ƛicsap,**	**ši?ƛa·**	
how it was	long ago	using	cinquefoil roots,	bracken fern roots	

?aɣc	**qʷa·?a,**	**čačabaɣiɓ̓ɬa**	**huʔe·yiɓ̓ɬaq**	**qu·?as**
that's	how it is,	very prosperous	the long ago	people

?udu·ƛ	**?u?u·kʷsa?ƛqʷiy**	**ši?ƛa·?aq,**	**?u?ukʷsa?ƛqʷiy**	
because	they ate	the bracken fern roots,	they ate	

ƛicsp̓aq,	**?u·ča?ksa?ƛ**	**ƛaqabs,**	**yaqi·yuʕaqad**	
The cinquefoil roots,	eating it with	oil	what we call	

k̓u·ɬši?ƛ̓	**wa·**	**?u?u·kʷsa?ƛqʷiy**	**ši?ƛa·?aq**	
'ku·ɬši?ƛ̓'	say	whenever he eats	The bracken fern roots	

?iš	**ƛicsp̓aq.**	**wiwkiɁqaba·ƛpid**	**łaɣ**	**?uya?ƛ**	
and	cinquefoil roots.	we don't bother with them	now	at this time	

hiyo·?ƛid	**?aɣci?**	**?u?a·tɣ**	**?a·di?daɣsa?ƛid**	
we stopped	that	gathering (of)	only thing we are	

da·či·ɬ	**yaɬaxibɬaqiyik**	**ʔuʔa·tx̣**	**ƛicsap**
watching	where they use to	gather	cinquefoil roots

čabuɬx̣idiš	**ƛaʔu·**	**ʔuʔa·tx̣**	**ʔuy**	**qʷabax̣sa·qʷiyid**
I guess we could	again	gather it	if	we wanted to

B. *Cooking and Storing "Roots"*

ʕeʕiy̓ʔaq,	**ƛicsp̓aq,**	**naxo·ʔaqʷ.**	**da·ɬšƛibsiyik**
The large-leaf clover,	the cinquefoil roots,	the smaller leaf clover roots,	I use to watch

qʷiy̓aqs	**yadaqk**	**daʔu·k̓ʷƛqu·s**	**l̓i·kʷa·ʔaq**	**ʔuʔa·tx̣**
when I was	a child,	I would go with the one	digging	roots

ʔadi·siɬaʔqʷiy	**cuba·diƛkʷ**	**qaʔawc**	**waɬši·ƛqʷiy**
as soon as she	fills her	pack basket,	she'd go home

yuwaʔƛ	**ʔuwiyaʔƛ**	**č̓a·ʔk̓aq,**	**č̓a·ʔaksaq**	**cukʷi·ƛ**
and then	go to	the water,	the fresh water	and washed it

x̣ax̣adaʔɬ	**cukʷiƛ,**	**yuwaʔƛ**	**cucu·spa·ƛ̓p**
really	wash it	and then	she has it dripping

ƛ̓u·baʕtaʔƛqʷiy	**yuwaʔƛ**	**ʔax̣kiʔ**	**ƛ̓uʔi·ƛ̓ƛ**	**ƛ̓ax̣če·s**
when the sun shines	and then	that	dried on the ground	on something flat

x̣a·č	**ɬictqa·saʔƛqʷiy**	**ƛ̓uša·ʔƛ,**	**yuwaʔƛ̓a**
high	onto sheet-like fabric	drying it	and then

ƛ̓usa·ʔƛ	**ƛa·ʔuʔi·dɬaʔƛ**	**ƛ̓uša·ʔƛ.**	**da·či·ɬa·ƛ̓ɬa**
dried it	adding onto it	dried it	she watched it

ƛ̓ušši·ƛ̓ƛqʷiy	**l̓a·q**	**qade·**	**ƛ̓uƛ̓u·ša·ʔdawi·ƛ̓ƛqʷiy**
when dried	properly,	ah,	when dried along the length of it

yuwaʔƛ,	**yuwaʔƛ**	**č̓ušši·ƛ̓ƛ**	**hita·ʔdʔisx̣aʔƛ**
and then,	and then	started digging	down the beach

sup̓icsaq	**ʔiyax̣x̣,**	**x̣ači·yaʔp**	**cušši·ƛ**	**ʔudu·ƛ**
The sandy beach at,		made it deep	digging	because

ʔayi·ckiduk̓ʷqʔa,	**kaɬka·ʔbaɬaƛkʷ**	**yaʔa·yaqʷicqʷiy**
it's shared by many,	it was known	which belongs to who

ya·čqapx̣aʔƛ	**babƛi·ẇadaʔƛ,**	**ʔo·ʔdiɬsaʔƛ**
in bundles	tied in the middle,	same as on

babƛi·ẇad	**qubu·bqʷiy**	**ya·**	**siƛip̓aq**	**di·xa·ʔdɬ**
tied up	whatever the	that	ferns	wrapped around

ɬiɬib,	**wi·k̓x̣**	**p̓aʔaɬʔa·qst**	**babaƛcqač̓awaʔƛ**
very tight	so it won't	come part	tied on both ends

ʔax̣k	**ʔa·ya·dɬ.**	**ʔa·dakši·ƛ̓ƛ**	**hitač̓u·x̣ʷ**	**ya·**
that	lots on along it.	fire started	while inside	that

kuwsaq,	**ʔi·x̣aʔƛ**	**kuwis.**	**ʔiyax̣iʔsaʔƛ̓ati·**	**hawliy**
hole on beach,	a big	hole on beach.	here on beach this	already

šiƛip̓ɬaq,	**ƛ̓aqp̓aɬɬaq**	**ya·**	**šiƛa·ʔaq**	**yuqʷa·ʔƛ̓**
bracken fern,	the leaves of	that	bracken fern root	and then

ʔiyaχíʔs ya· bibiʕtaḵʷkʷapɬaq, baqkʷaqɬi·, šiχipɬaq
on the beach that the deer fern what you call it, the fern

ʔiciptaq χaqpatḵʷaq ʔiyaχíʔsaʔχti· yuwaʔχa
lady fern leaves of the on the beach this and then

ɬe·paɬχ ʔiyaχ ʔayi·q, ɬe·pat, ʔuχʷʔa
salal bush here at lots of salal bushes, that's what

ʔukʷaqɬ ḵeyicapχapɬaq. ʔaye·ʕχ ɬe·pat.
it's called salalberry bush The. lots of salal bushes

yuwaʔχ ʔuʔu·bχičiχχqʷiy ʔaʔdicqʷiy ʔadak
and then when it comes time how long the fire burns

yu·yaʔχqʷiy ʔa·dakšχ yuwaʔχ ɬaʕcʔe·ʔaχp
early morning fire starts and then when noon time comes

dačšiχχ qʷa·ʔχuwis qawašaʔḵχ ɬidičkʷaq, hitʔaɬχ
looked at it if it was already red hot the rocks, came off,

ʔadḵaq, ki·cki·cšiχχ hitʔatp yuwaʔχ qade·ʔχ
The fire poking it off and then The—ah,

ʔukʷtqa·siχχa ʔaχcíʔ šiχipɬaq, ʔicipɬaq
spread underneath that the bracken, the lady ferns

qʷa·ʔχ ʔaχk papaḵʷpaɬaʔχ hitači·diχχ
like it that put into ricks was put inside

sačcaχtiʔsa·χḵʷa ʔu·cʔaq ya· χaʔu·čaq
facing one way belongs to that other person's

ʔu·capiʔsaʔχ ya· qʷa· ʔadi·siɬaʔχqʷiy ʔa·χaqsaqa·sχ
facing that direction like that as soon as it is put into two layers

χa·ʔu·χʷsaʔdawiχχ ʔicipt, ɬe·pat yuwaʔχ
put another layer of ferns, salal bushes and then

χaʔuʔbitšiχχ hitači·dχ, hitakste·ʔɬ qʷa-a-a
again put inside put down into like that

ɬa·ta·daq ʔa·ʔa·χaqsaqsaʔdɬ ʔaχk χaqpɬaq
stacked two layers to a stack This here leaves

ʔicipɬaq ʔu·cʔaq χaqpat ʔiš šiχa·ʔaq.
lady fern belongs to leaves and deer ferns

kʷa·dsaq, čukʷiyo·ẇayʔakχaʔχqʷiy ʔaχc qʷisiɬ
Camas, was washed real good that got like that

kʷa·dsaq yuqʷa ʕeʕciẏʔaq, naxu·, šiχa·ʔaq
The camas too the big leaf clover, the small clover, bracken roots

hidasχ cuba·dχ.
reached being full

ʔupi·ʔisχaʔχ ʔaχc ʔadukʷt, ʔiyaχ
at the centre now that wide (round) at

ʔabapi·ʔsaq ʔaχkíʔ yaɬibtaq ʔadḵaq
at the middle of this here where was the fire

hitaċ̓·diɬɅ **ʔaɣkiʔ** **qʷi·si·ɬe·ʔisqʷiy** **duċ̓ʔa·ʔaq**
put into that is whatever is being cooked at the pit

hidasɅ **cuba·dɅ** **ʔaɣk,** **ʔiyaɣiʔsaʔɬa** **ti·**
reached got full this, located on the beach This

yaka·ɬaq **piċ̓paq** **ʔuɣʷtiʔdaq** **ɬictu·p**
cedar-bark mat inner cedar bark made of mat

ʔayi·q. **ʔatʔaš** **ʔa·di·siɬsaʔɬa** **cuba·diɬɅ**
lots. even then as soon as it is become full

yuwaʔɅ **sukʷiɬɅ** **ċ̓aʔak** **ʔaye·ʕaq** **ċ̓aʔak**
and then she took water, lots of water

hawɬiy **ċ̓čɅeẏaḳɅ** **hitaċ̓u·siɬɅqʷiy** **ʔaɣc**
already for pouring on put into pit that

qʷi·si·ɬqʷiy **duċ̓ʔa·ʔaq.** **Ʌukʷi·ɬa** **ʔaɣc** **ʔadukʷt**
what is being cooked in the pit. wide girth that wide

ya· **hitapi·ʔa·ċ̓ɬaq** **ʔabapi·ʔa·ċ̓ɬaq**
that located on the middle of the

yaɬkʷiċ̓o·ʔaq **ʔaɣkiʔ** **Ʌicsaṗaq** **dubaya·χaq**
location inside the this here cinquefoil roots, all kinds

č̓·ʔiɬɅa **ʔaɣkiʔ** **cuba·diɬɅqʷiy** **yuwaʔɅ**
dipped bucket this here when it's full now and then

č̓čiɬɅ, **č̓čiɬɅ** **bu·ċ̓aq,** **šuċ̓aċ̓q** **č̓iċ̓ak**
poured, poured four five bucket[s]

hidasiɬɅqʷiy **ʔu·š** **ʔaɅpu·č̓** **č̓iča·ʔbadχ**
when it reaches sometimes seven (full) buckets

ʔadiċ̓i·dɬa **ʔaɅpuċ̓qi·wɅ.** **ʔe·e·e·ʔe·ʔšaʔɅ**
how much went in was seven buckets full very, very quickly

hi·takʷi·ʔdadɅ **Ʌaqpɬaq** **ʔade·ʕɅqʷiy** **huʔa·**
covered with The leaves as many as remained

hitakʷi·ʔdadiɬɅ **šiɅiptaq** **ɬaqpaɬaq** **ʔayi·q**
covered with bracken fern The leaves of it lots of

ɬi·čšiɬɅ **ʔaɣkiʔ** **Ʌa·Ʌa·ytaʔɅ,** **ʔaɣʔe·ʔɬaʔ**
at same time that being added on, then it was

ɬica·bʔiɬɅ **ʔuɣʷtidi·wiɬɅ** **ya·** **yaka·ɬaq**
weighted down using the that cedar-bark mat

pič̓pχtiʔdaq **ɬictu·p.** **bušabʔiɬɅ,** **yuwaʔɅ**
inner cedar-bark mat. it became airtight, and then

tu·kʷšiɬɅ, **tu·kʷi·ʔdʔi·diɬɅ.** **wiḳʔitšiɬɅ** **ʔaɣkiʔ**
poured, poured sand on top. was no place now

ya·ɬkuwaχsɬaχi· **buqʷckʷe·ʔaq,** **du·baʔɅ**
where it might leak out the steam, all was

bušabiʔɅ. **ʔadaċ̓aqsiɬɅqʷiy** **ya·** **ʔi·č̓χapiʔs**
closed up. it was now high that mound on beach

ɬi·i·i·čcqabʔiƛ̓ƛ **yuwaʔƛ** **yuwaʔƛa** **qʷe·ʔisaʔƛ**
was banked on the sides and then, and then it remained on beach

ʔaɬc **ʔa·ʔdʔaq** **ʔatɬiy.** **ʔuyaʔƛa**
that the length of the night when it is

ʔa·bayaʔƛqʷiy, **taʕsʔe·ʔƛqʷiy,** **hiyo·ʔpɬʔiʔisk**
tomorrow at noon time maybe was past

ɬaʕsiʔ, **ɬaɬʔaʔƛ** **kʷicšiƛ̓ƛ.** **siʕaƛ̓ƛa** **ʔaɬc**
noon, now he uncovers it. it's now cooked that

ʔuyaʔƛ. **ʔaɬc** **ʔuyiyaʔƛa** **ɬicsʔaƛkʷ**
at that time. that at that time now spread out her

yaʔa·yaqʷicqʷiy **ɬaɬɬa·buʔbƛ** **qʷaqʷaɬtida·kqʷiy**
whoever owns them now recognize the kind of

baƛtu·p **baƛaẇad** **ƛ̓uʔbačɬtidqʔa**
ties being tied in middle because it's tied with roots

baƛaẇadiʔbaq **kaʔbatkʷ** **du·b** **qʷa·kqʷiy**
The one tied in the middle, known to all how her

ɬabqʷiy, **baƛayu·** **ʔade·ʕaq** **xatxa·ʔdčiy**
knot is tied as many as the woman

ʔaɬcʔe·ƛa **ɬuɬuʔsa·ƛkʷ** **ɬuʔaɬ**
here now she flat on beach board

ʔo·siʔsaʔƛ̓a **qade·** **ʔaɬk** **yaka·ɬ**
spread on top was the—ah that cedar-bark mat

yaqi·yuʕaqs **wa·** **ƛuɬa·a·a·ɬaq** **pič̓ipɬtid**
to which I say. very, very clean of inner cedar bark

ɬictu·p **ʔukʷa·siƛ̓ƛa** **ʔaɬc** **ɬukʷa·siƛ̓ƛ**
sheet-like put on top of that dumped onto it

č̓a·č̓a·wisa·ʔdaɬ, **kʷa·dis,** **naxu·** **xaxača·ʔaƛ**
one of each, sorted camas, small-leafed clover, all sorted

ʔaɬk **ƛ̓u·baʕɬaq** **yu·p.** **ʔadi·siɬa·ƛ̓p̓a**
This sunshine slight breeze. as soon as

ʔaɬc **ƛ̓uƛ̓uša·ɬačiƛ̓ƛqʷiy** **ɬa·q.** **yuwaʔɬ**
that all get dried really and then

sukʷiƛ̓ƛ **yaqʷč̓aqaɬ.**
took then whoever of them that owns which

ʔiʔi·ɬa **ʔaʔadɬʷa** **ʔaɬiʔ** **buɬu·ẏ** **ɬaɬa·yaksukʷabɬ**
they're big as big as This here basket weaved far apart

ɬupɬa·bɬ **wi·kɬaʔɬuw** **ʔučqšiƛ** **qaʔawč̓aq**
as big eyes to prevent it from molding, the pack basket

qʷa· **caxʷapɬ** **ʔa·diʔdaɬ** **su·su·ʔuɬč̓ab**
like that round ones only thing it has handles on sides

ʔaɬk **qʷa·.** **hihi·tɬsaʔdawiƛ̓ƛa.** **ʔuɬʷtidaʔƛ̓a**
that like. now put in between using that

ʔaχkíʔ qade· ʕaqpɬaq x̌uša·k q̓a·ʔax̌aq
This here the—ah, the grass dried which is now

šasabak̓ʷukʷχq̓iy, x̌usa·k̓χ, ʔuʔi·χʷsaʔdɬaʔx̌a
yellow like, all dried up that's what is between

ʔaχcíʔ x̌i·ɬuq̓ʷšix̌šix̌χq̓iy. x̌uša·ɬaq
That is now put away The dried up

wike·ʔχ pa·skeyk ʔiyaχ ʔuɬa·ẇ ʔučqšiχq̓iy
now not dampness at reason it might get mouldy

ʔaχcʔe·ʔχa q̓a·χaʔχ ʔaχc hida·six̌χ ʔukʷa·six̌χ
that is now like that that is got on put up on to

če·pa·ɬaq ʔaχc q̓a· ɬuʔaɬ ʔaɬ, x̌uq̓ʷ
Thing you pull up that like board thick wide

ʔuʔu·ʔbχaʔχ hihida·s. hi·dapaʔx̌a ʔaχkíʔ
enough room to all get on it. pulled up now that one

ʔu·kʷapaʔχ ya· baʔsaq, x̌i·daqa·ʔaq yaɬʔaq
up there that the house where it's smokey where it's

ʔa·daksaq baʔas yi·i·i· x̌a·ya·saʔχ huhu·piduckʷa·s
real fire house. wa-a-a-ay over there all lined up alongside

ya·ɬta·ywe·ʔe·k̓aq hi·tʕa·ʔɬax̌p ʔu·ʔba·ywa·ʔχ
where she will get, take it down as much as she needs

ʔadíʔkišči·kq̓iy. ʔa·di·siɬaʔx̌a ʔučaχ qade·ʔaq
how much they eat. just then cooked in The—ah

siʕax̌qʔa ʔudu·χ hawɬiy ʔa·di·siɬsaʔx̌a
it's cooked because already just then she

ʕaqabaqtʕa·χisχ ʔaχkíʔ ɬidičapχak hupa·seyk
grass put on bottom of this here rock-like made pots

ʔi·ʔinak̓ʷɬčχ čcʔak buq̓ʷšix̌χ, yaqi·yuqʷaʔx̌aq
small amount of water, now steaming, what they now

babɬaʔd 'steaming' wa·. ʔu·ʔu·kʷtišsaʔx̌a
White man steaming say. she was just going by

hitksaʔdaʔχ ʔudu·χ siʕax̌qʔa yuwaʔχ
came off fire because it's already cooked and then

ʔukʷsix̌χ k̓adaẇa·ɬaq ʔadksʔiqχtid χuʕa·six̌χ
took with her a plate made of wood dumped into it

χuɬa·ɬačix̌χ. ʔaχc ʔiyaχaʔx̌a
got clean on. that where it is then

ʔukʷubaqχeykubɬa haʔukʷ. ʔuχʷa·kʷχidiš ʔaχcíʔ
at the end of meal eating. I guess that's our that is

ʔaχk ta·q̓ʷa·pawi·dɬaʔp yuwaʔχ k̓u·ɬsix̌χ
This squeezed into balls and then dipping into oil

ʔaχk q̓ʷaʔap χaqabsaq ʔu·čaʕks.
This doing the oil eating with

ʔaχcíʔ ʔu·ʔba·ʔa.
that is the end.

INDEX TO NITINAHT PLANT NAMES

(Excluding general names pertaining to plant parts—for these, see Appendix 3.)*

Nitinaht terms are arranged according to the following order of letters and symbols:

ʔ a a· b c c̓ č č̓ d h ḥ i i· k k̓ kʷ k̓ʷ l l̓ ɬ m n̓ o p p̓ q q̓ qʷ q̓ʷ
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